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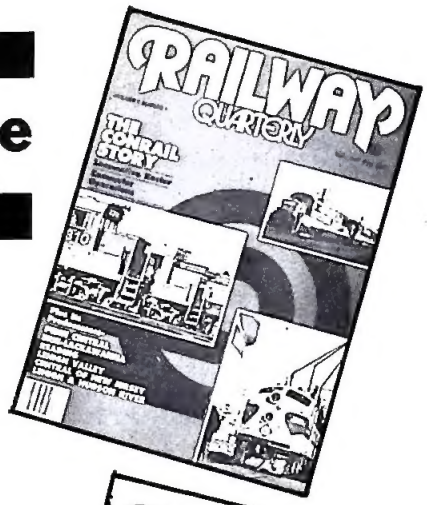

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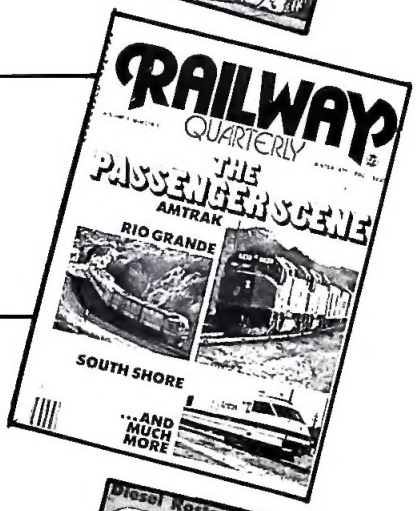

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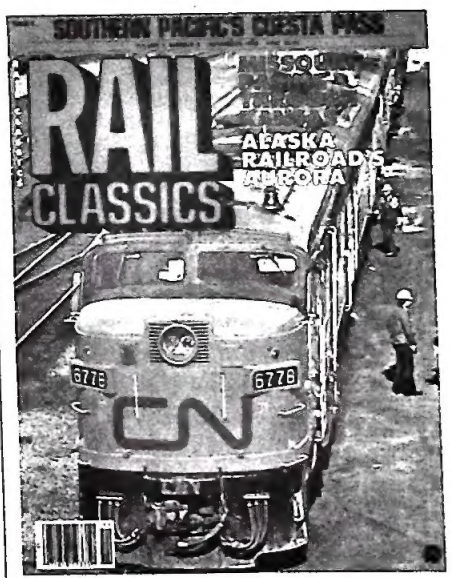

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PCC Clarification

We have read with interest the recent discussions on the PCC car by Mr. Van Wilkins (*Rail Classics,* February, 1978) and by Mr. Kenneth Harrison (Rail Mail section, July, 1978). In response to the often misunderstood statements that the PCC car was not defined by the body, many aspects of the car shell were indeed protected by United States, Canadian and European patents.

Within the United States, the Transit Research Corp. held a total of 144 different patents, of which 141 applied to railway equipment. The misstatement that only the trucks were covered by patents may stem from the fact that the majority of the patents (87 in all) covered trucks, wheels, and related components.

However, a total of 16 different patents were issued to the Transit Research Corporation covering various aspects of the carbody. The most interesting of these body patents was issued to Dan Bell (Pittsburgh Railways) and assigned to Transit Research Corp. in July 1938. The U.S. Patent Office Design Patent 110384 covered the ornamental design of the prewar single-end standard PCC car body, and included side, roof and end elevations of the car. The other 15 body patents included aspects of body framing, standee window designs, stanchions, seat frames, door hinges and even the heating ducts.

The Transit Research Corp. defined a PCC car, as any vehicle on which they collected royalties. Each and every royalty contract issued by TRC contained a complete list of all patents issued and pending by the date of the royalty contract. Both the builder and the operator (as well as second-hand purchasers within the 10-year life of the first contract), were duty-bound to honor the patents and to further assign to TRC any patentable improvements they made in the car.

It should be explained that Mr. Harrison's explanation that electrical patents defined the PCC car is also, in general, incorrect. The Transit Research Corp. did patent the sequential application of the three braking systems, but they did not own any patents on the electrical equipment per se. The original membership agreements for the President's Conference Committee dating to 1930 specified that all patent rights should be subrogated to the committee. Both Westinghouse Electric and Manufacturing Co. and General Electric contributed to the development of the PCC (to the collective tune of $100,000). However, these two firms refused to sign the ERPCC membership agreement and thus preserved the rights to their own inventions.

Clark Equipment Company and St. Louis Car Company also incorporated parts on PCC cars for which they and not TRC held the patents.

Fred W. Schneider, III
Stephen Carlson
Lancaster, PA

(The writers are Co-Authors of "PCC —The Car That Fought Back," to be published by Interurbans, Inc. in 1979.—ED.)

How About "MLW-Boat"

I am writing this letter regarding an error on page 35 in the What's Happening column of the July 1978 issue.

In regards to 4210 being regarded as a "U-boat" I'm sure her builders (MLW) Montreal Locomotive Works would have a sly smile on that. The engine is an MLW, M-424, CP des-

ggnation DRF-24b; Note the cab windows are vee'd forward and not flat as on the GE products.

A small note on the BC Rwy 2860 excursion in April and May. Taken from page of "CP Rail News" (May 31/'78 I'll quote it verbatim:

"Since the writing of this story, CP Rail News has learned that Sid Claridge, chief engineer on board the Royal Hudson, passed away shortly before the train's tour was completed. Claridge, 69, a pensioner at the time of his death, at one time operated the 2860, one of the Hudson-type steam engines built in Montreal in 1940 for use in B.C."

John B. Lameck
Windsor, Ont.

Wrong Engine

I noticed in the latest issue Vol. 7 No. 4 July 1978 on page 34 the following misprint. Under the photo of the Southern Pacific diesel rebuilt units by Morrison-Knudsen, the type of engines in these units is a SULZER, not a Sulver.

Douglas F. W. Conrad
Halifax, Nova Scotia

(The new M-K diesels mentioned have been returned to the Morrison-Knudsen plant by the Southern Pacific. Failures in all four diesels will require further work. Date of their return to the SP is uncertain at this time.—ED.)

Wrong Distance

I was happy to see my East Cooper & Berkeley #2001 appear in the July issue of *Rail Classics*. In my haste to correct the information supplied, I may have thrown you off the track. The line will be 15.7 miles long, not 15.7 miles from Charleston. Actual distance (road) is about 30 miles. Sorry about that.

Joseph Kmetz
Hampton, VA

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Child abuse hurts you, our country, everybody. It knows no boundaries of race, religion, income group or social status.

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ON THE RAILS

By Ed Stauss

Conrail isn't to blame for some of its problems such as the freezing winters, the coal strike or the Johnstown flood, but other failures are strictly homemade. Poor service has driven customers to other railroads and even trucks. They inherited a disaster from Penn Central yet the big wheel seems to be getting worse instead of better. The United States Railway Association reports that the average number of locomotives out of service at any one time has increased from 708 in 1976 to 817 in 1977. At times in early 1978 the number of loaded cars moving no more than one day late was less than 40% The only positive aspect has been track rehabilitation which has exceeded expectations. The bottom line is that Conrail could need as much as $3.8 billion additional federal assistance during the next five years.

Is Conrail too big? The Providence Worcester Railroad is a railing success using branch lines, discarded by Penn Central and Conrail. Its small size gives it problems of a different scope than those of Conrail. Perhaps Conrail is just too big an organism for any mere mortal to fully know and understand, let alone solve its problems.

* * *

One of the biggest bombshells to hit Conrail recently was the terse news release concerning the sudden departure of Richard D. Spence, President and Chief Operating Officers. Once the man responsible for making the Southern Pacific such a well run railroad, it would appear that he is the first of what may be many scapegoats.

* * *

The most **advertising** by a class I railroad in 1977 was Union Pacific's $2,686,000. The next five were Santa Fe, Southern, Conrail, Missouri Pacific and Southern Pacific. This ranking, compiled by AAR does not include Amtrak or Auto-Train.

Seaboard Coast Line has called off talks with Southern Pacific on forming a **transcontinental railway.** Perhaps SCL's heart was never in it; it certainly isn't now as SP continues to buy SCL stock.

* * *

Southern Railway wants to buy **Illinois Central Gulf** and ICG is cooperating in feasibility studies. Could be another good end-to-end link-up.

* * *

Too big already, Conrail grew by 105 miles in June when it acquired a lease until 1998 on the Lehigh & Susquehanna Railroad.

* * *

CP Rail will spend $163 million for improved track, rolling stock, and shop facilities in 1978. Of this total, $10 million will go for double-tracking projects in the mountains of British Columbia.

* * *

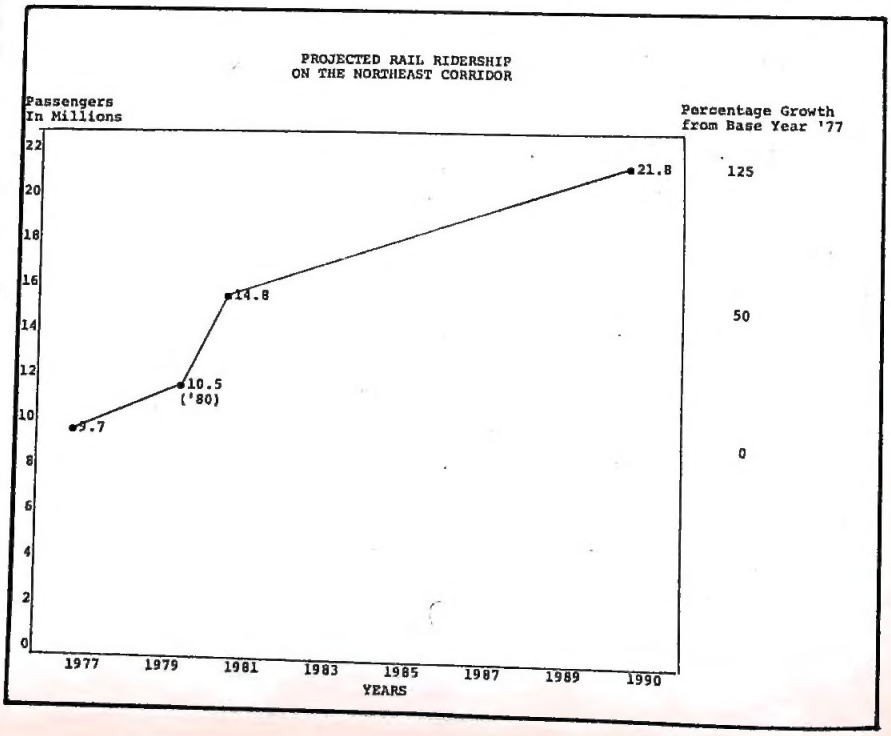
Empty box cars draw no revenue and Conrail is trying to increase what they call back haul freight. Box cars averaged 69 empty miles for every 100 revenue miles in the eastern district in 1977. In the same conditions, trucks averaged only 31 empty miles. To improve efficiency, Conrail is launching a new marketing effort, armed with special rates.

* * *

A large **white dot** on the side of a freight car means it still has the unsafe high-carbon wheels which have been ordered out of service by the end of 1978. It has been estimated that nearly 70,000 such wheels were still in service in June. After replacement, the white dots are changed to yellow. Although the wheels tended to be long-wearing, they also were brittle and prone to sudden failure.

* * *

Heavy digging has been favored for **Pittsburgh's light rail** improvements. In addition to new cars, stations and a new tunnel, the planners say a subway is best in the downtown because lower operating cost and



higher reliability will offset the cost of getting the rails underground.

* * *

Ridership on the **Shaker Heights** line in the Cleveland area is so good they are buying back nine PCC streetcars sold to Toronto in 1952. Cleveland's RTA hopes to get new Italian light-rail cars beginning in 1980.

* * *

Conrail's 210 daily **commuter trains** on the New Haven line are now operated with new equipment and ridership is growing. They expect to carry over 20 million passengers in 1978 while less than 19 million were carried in 1977.

* * *

By 1981 the $1.75 billion improvement program on the **Northeast Corridor** will be close to completion and an upward trend should be noted in ridership. As shown on the graph, travel is expected to more than double by 1990 to 21.8 million people.

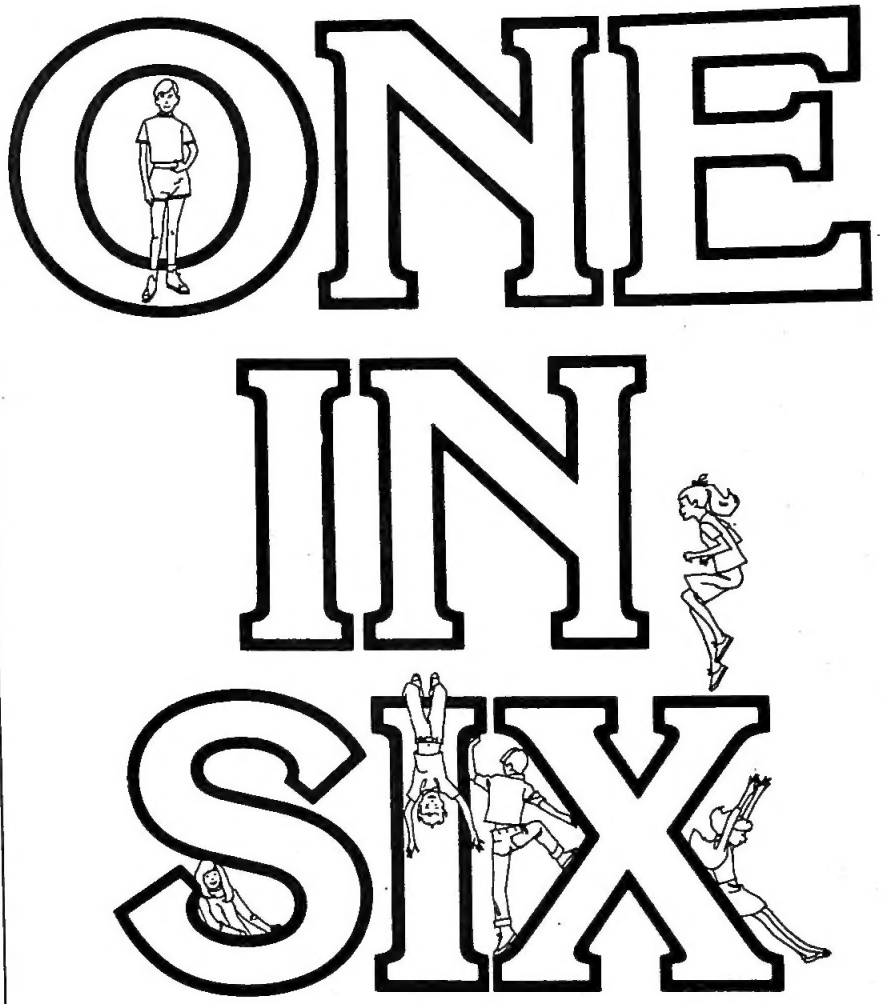
* * *

Why has the **San Francisco Zephyr** been nominated for discontinuance by the Federal Department of Transportation? With 127 passenger miles per train mile, its patronage is better than thirteen other trains which DOT recommends keeping. The question was asked by Adriana Gianturco, Director of the California Department of Transportation (Caltrans), a strong supporter of rail transportation.

Just to carry current levels of ridership between Chicago, Colorado, and California, one train would require 25 cars during winter and 35 cars during summer. But because safety regulations limit trains to eighteen cars, the U.S. DOT proposal would have the effect of forcing Amtrak to turn away 40% to 50% of its customers in the Chicago/West Coast corridor.

U.S. DOT, Caltrans continues, has not considered the revenue that could be generated by hauling bulk mail on Amtrak trains. Caltrans believes that the existing system could easily generate $50 million annually in mail revenue and a very slight expansion could accommodate another $40 million.

Secondly, DOT has not considered a comprehensive marketing program. In California, Caltrans has done much in the areas of station location, station improvements, on-board service improvements, signing, price promotions and advertising and finds that it all has an enormous impact on ridership.



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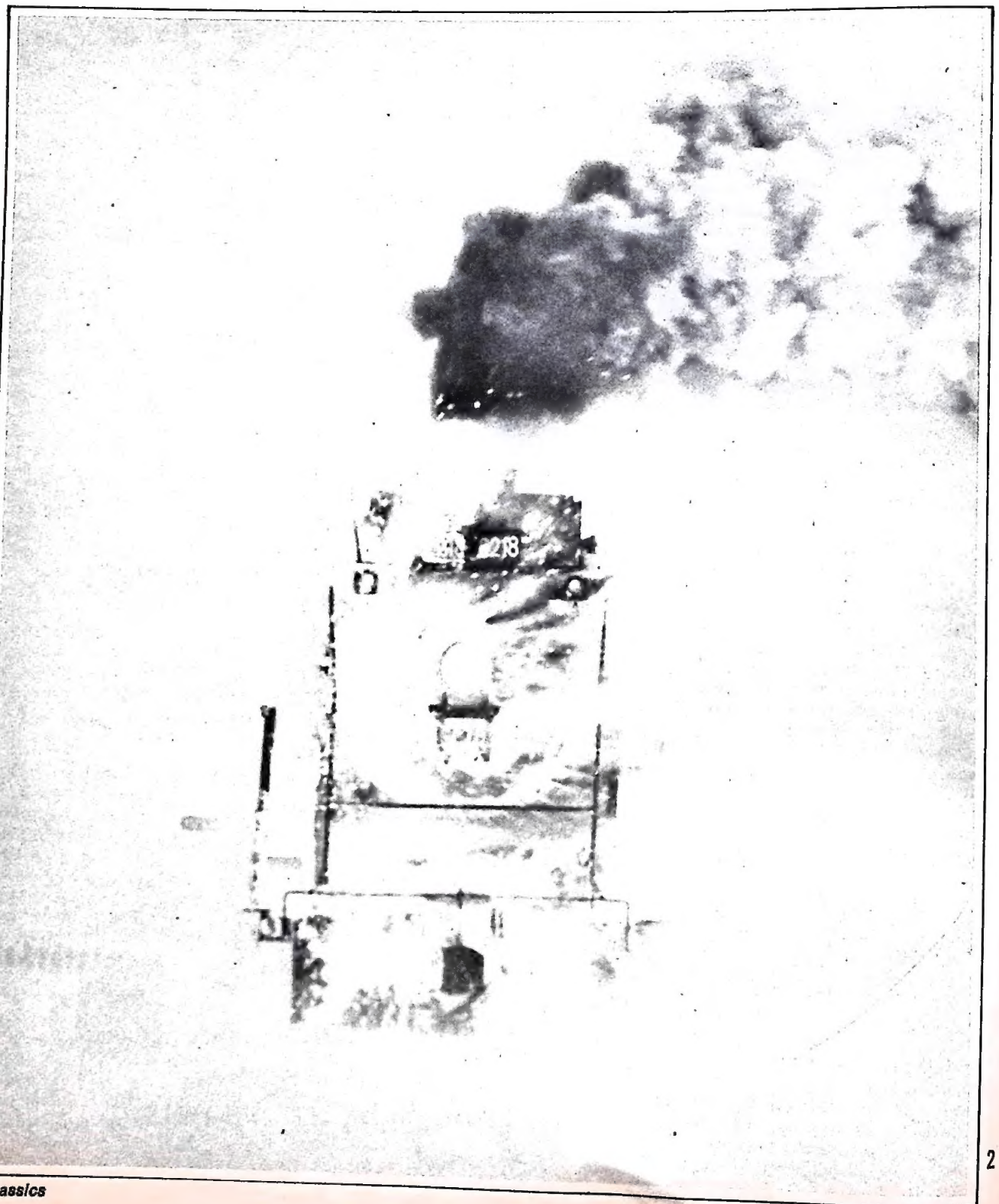
THE WAY THEY WERE

PHOTOGRAPHY/COMMENTARY BY GEORGE A. FORERO, JR.

With four aboard and a full fuel load, I've coaxed a reluctant Cessna off a dark runway several hours before dawn, turned, and flown down the Mississippi toward Winona Minnesota. Our purpose—a 4-8-4 numbered 4449.

Alone except for an all-night radio station, I've coaxed an equally reluctant Volkswagen over endless miles of Interstates and West Virginia



backroads into a valley so remote that no amount of fiddling with the dial would tune in a clear radio station. The destination—Cass, West Virginia.

A lot of effort goes into the pursuit of the steam locomotive in the '70s, and most of it has but one purpose in mind—to come back with a photographic record worthy of this unique machine and the effort spent

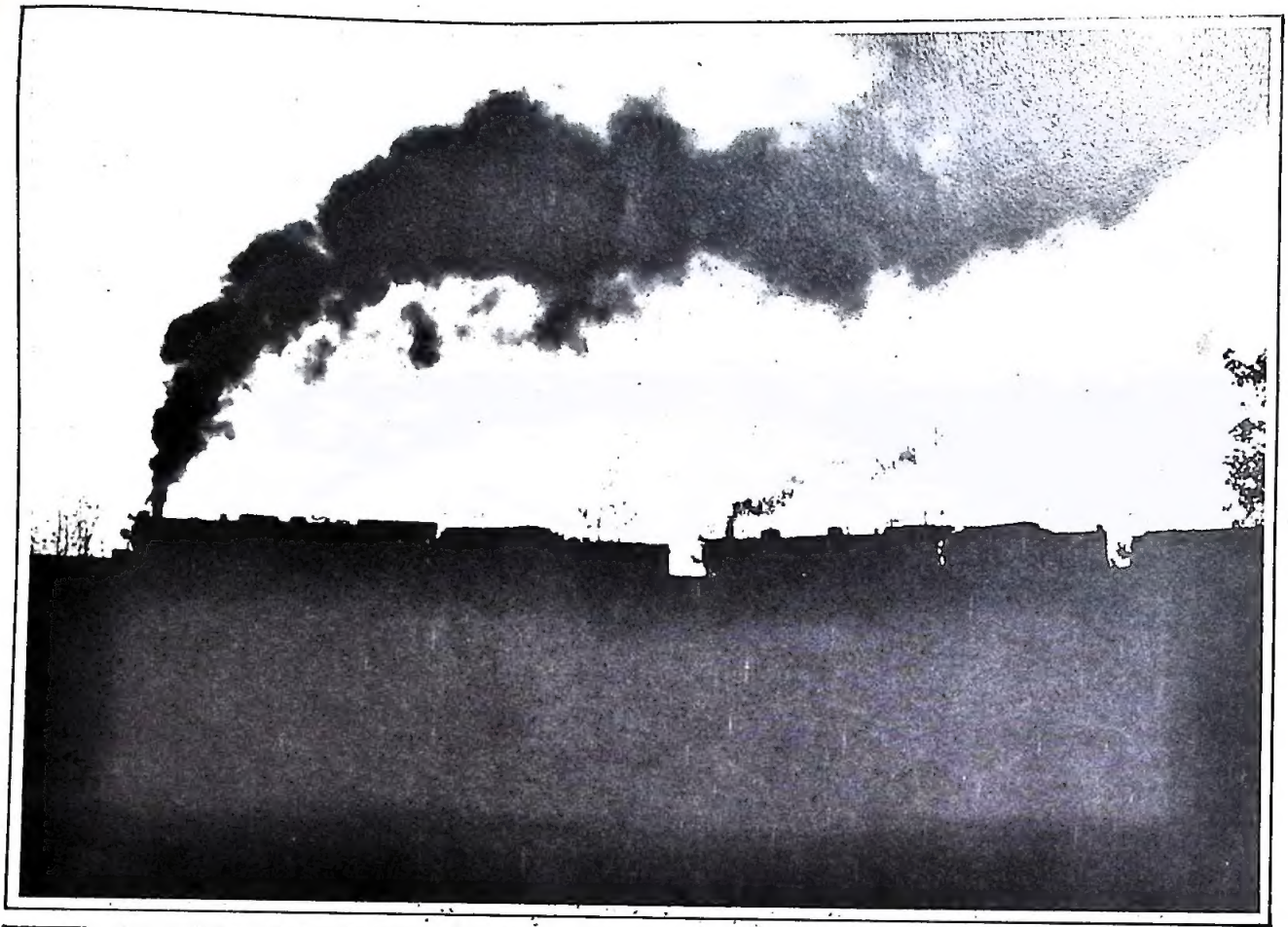
OUT OF THE MIST

1 *It was a day that you would normally spend warm and snug inside, sorting out your negatives, with only an occasional glance outside at the weather aviators would call "zero-zero" (ZERO ceiling, ZERO visibility). But there's steam moving, in the form of a CP Ten-Wheeler and a Florida East Coast Pacific, so here you are at the Lehigh Valley tunnel at West Portal, New Jersey—soaked to the skin, chilled to the bone. A headlight sweeps around the curve, probes the darkness of the tunnel, then sweeps by accompanied by the muffled exhausts of the tandem locomotives. The varied consist, the multi-colored railroad patches on pin-striped "engineers" caps, the Nikons, Canons, Minoltas, the tape recorder microphones—all unseen in the mist. A 1975 fan trip excursion—or a timeless vignette of the past?*

1

STEAM IN THE SNOW

2 *One of my all-time favorite photographs, this shows Canadian National #6218 busting through snowdrifts near St. Marys, Ontario on a March 1971 excursion. The temperature was as cold as it looks, with the wind whipping the snow across the tracks, blowing 6218's exhaust almost horizontal and the snow over the face of her smokebox, to stream around her headlight and to trail away in rivulets downwind. Except for the engine number and other details, this could be the SOO fighting a North Dakota blizzard out on the prairies (or a GN, or NP, UP, etc.).*



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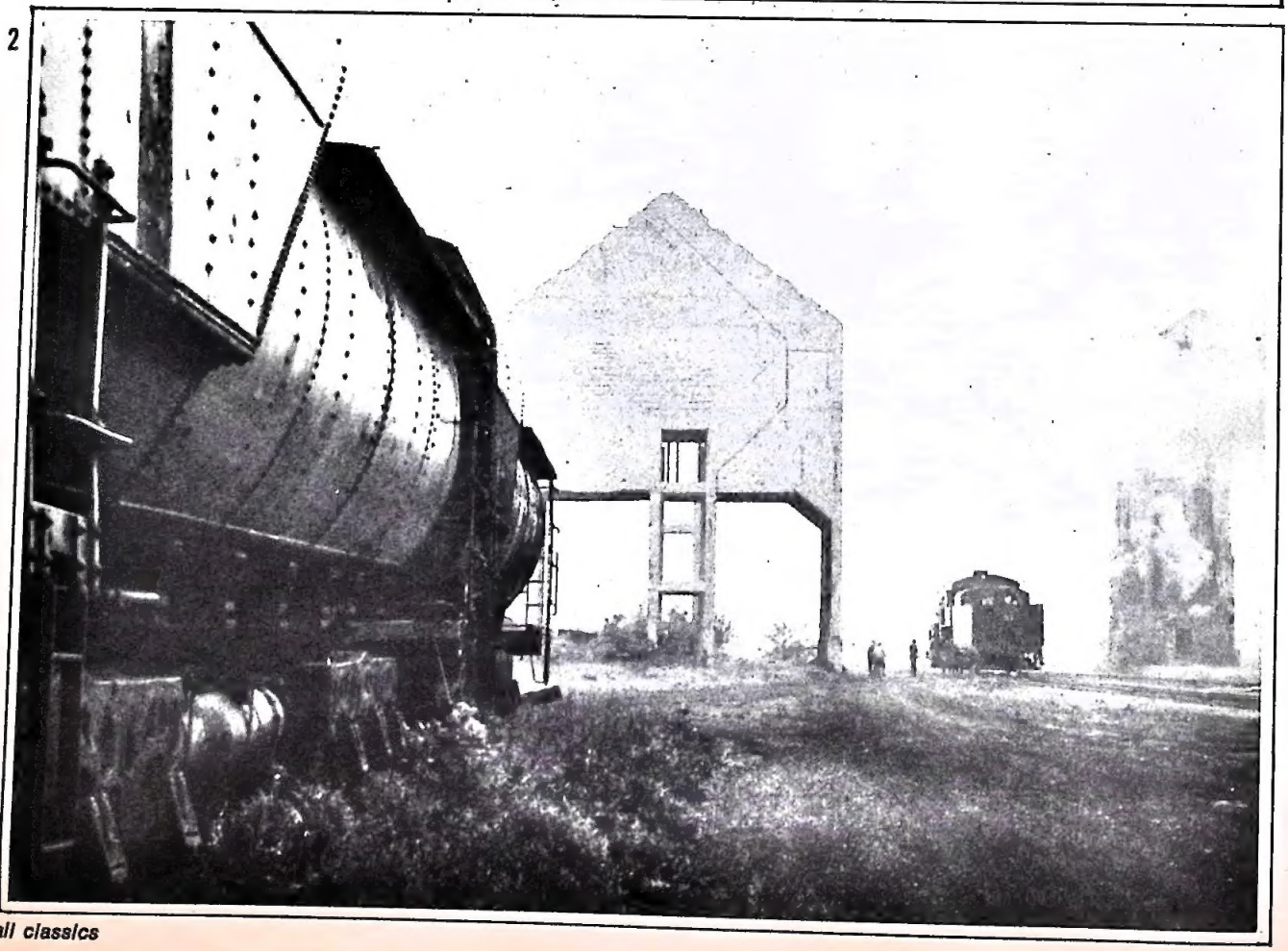


2

STEAM ON THE CURVE

1 *Mechanical problems delayed the westbound trip of Reading 2102 and Grand Trunk Western 4070 around Horseshoe Curve until long after the sun disappeared behind these Central Pennsylvania mountains. The red glow to the west had already faded to pink and even that was starting to turn a deep rich blue at the top of the sky—when suddenly the valley came alive with thundering exhausts and echoing whistles as the two behemoths silhouetted themselves against the last glimmers of light in the west, crawling across the sky. Never mind the fact that 4070 was lame, that there were two diesels in the consist, that this was the year 1977—for a few minutes all that was irrelevant.*

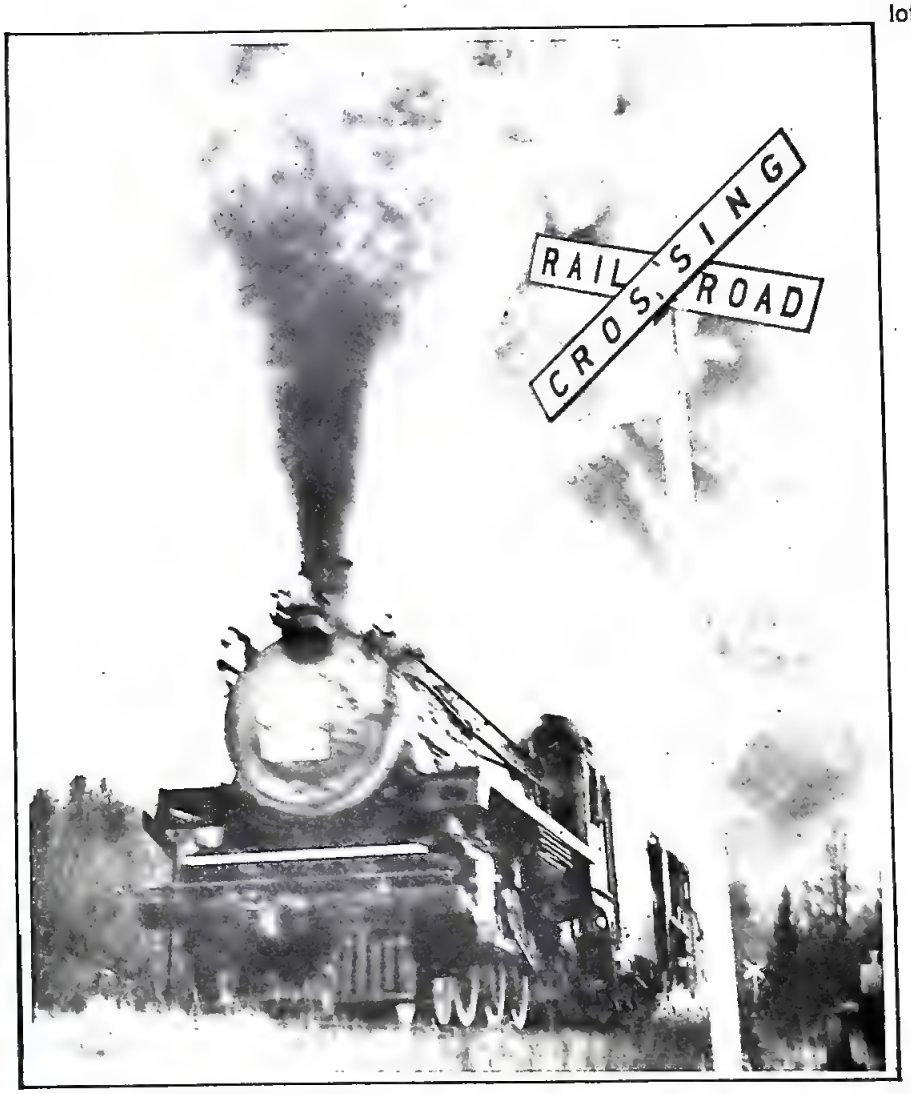
THE SURVIVOR

2 *Who of us have not let our thoughts wander as we looked upon some relic of the steam age—an isolated water tank, a massive concrete coaling tower, or a string of locomotive tenders rusting away? You could almost hear the hiss of escaping steam, right? We are now in the C&O yards in Columbus, Ohio and that shadowy shape next to the coaling tower is no apparition—she's a massive 2-8-0 ghost from the Lake Superior & Ishpeming, now working for the Hocking Valley Scenic Railroad. Ducking in and out of the early morning mists she is being broken in after wintering in the C&O roundhouse. The 1973 summer tourist-hauling season will begin soon.*

chasing it. And yet I'll consider a long, tiring trip well worthwhile if I can come back with at least one photograph which transcends the obvious and ordinary. This is the type of photograph which makes the statement, "This is the way it was."

No, I make no pretense that a freight engine towing 20 cars of mixed lineage (and paint schemes!) alongside a highway jammed with frantic pacers presents an accurate glimpse into the past. No—but it's all we have now. And there is always that chance for that *one* encounter which leaves you with the feeling that you have been privileged to take that backward glance.

The accompanying photographs purport to show such moments. They are some of my favorite excursion/tourist line photos. Each made the return portion of a long trip a whole lot easier.



GRADE CROSSING THUNDER

Was there ever a higher drama than a steam train bearing down on a country grade crossing? The two CP Pacifics had suffered a renumbering and lettering job that turned them into Rutland and D&H steamers, respectively; the highways were packed with pacers and the return trip ran late. But here we are as the locomotives bear down on a pair of closely spaced grade crossings, light falling fast, Tri-X in the camera, lens wide-open and shutter at 1/30 sec. They sweep by in a symphony of whistles, exhausts, and pounding rail joints—a grade crossing drama repeated one more time.

COPPER COUNTRY CLASSIC

Under a brooding Lake Superior sky, Copper Range #29 eases up to the water plug at Calumet Junction to top off its tank before dropping down the 1.8 percent grade into Lake Linden. Nothing unusual, as #29 has been doing exactly that for over half a century now, over these same tracks in Upper Michigan. Except that it's now 1970 and the 2-8-0 is hauling tourists for the Keweenaw Central. Could you have told?

WORKADAY STEAM

Sending everything but the fireman's scoop up the stack, 0-6-0 #9 tries her utmost to pull leased Reading SW-1 #24 out of her predicament on short line New Hope & Ivyland. This scene, taken January 24, 1970 resulted when the weekday freight derailed on an ice packed crossing. No. 9 had been peacefully slumbering the winter away when the unexpected call to duty came. And, no, that diesel does not date the scene. You see, the 0-6-0 was built AFTER the SW-1!

It's more than a train, the Alaska Railroad's AuRoRa is almost a way of life.

DOMES TO McKINLEY, VIA HONOLULU

BY KEN C. BROVALD

The Alaska Railroad's passenger train, *the AuRoRa,* (Aurora Borealis) means "Arctic Light" and it is just that for hundreds of settlers in the interior bush country of Alaska.

It is the chief means of transportation to the outside world. It is a friend to the modern day pioneer. It moves over the 356 miles through the Alaskan wilderness, often miles from a highway, picks up hitchhikers, travels at a top speed of 49 miles per hour, rides on 115 lb. rail, and climbs a steady 1% grade as it beats its way north into interior Alaska.

Where else could you see people standing beside the track in the woods, waving at the train to stop, and where else would a train stop to pick them up?

The train runs twice a week during the winter months, but runs daily in each direction between Anchorage and Fairbanks from Memorial Day through Labor Day. The one way fare between the two cities is $31.50 and the trip takes over 10 hours.

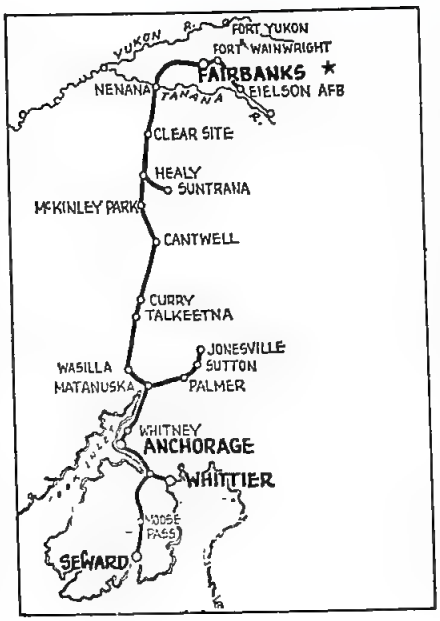
During the summer tourist season, as many as 400 will go on the trip, just to see snow-capped mountains on all sides as the train twists and

turns following the river valleys.

The streamlined dome train has all of the distinctive qualities of the Union Pacific, even to the photos of Sun Valley displayed on the coach end panels. When the cars were declared surplus after Amtrak took over the passenger runs, the Alaska Railroad bought 30 cars from the Union Pacific at bargain prices. The list included 4 dome cars and a business car. The domes. are a real treat for the passengers and offer a relaxing way to travel into the interior.

The view is ever changing. Wild life in the form of moose and caribou can be seen and remote trappers cabins are visible. On the trip one quickly takes on a sense of complacency that allows even the most harried to unwind, settle back and enjoy some of natures most delightful panoramic views.

The train is more than nuts, bolts and trackage. It is an experience, a feeling, but mostly a sharing. The train delivers messages, mail and friends. It is a unit of exchange between communities, a sharing of a resource and a utility.



Two FP-7's power the 12 car train in mid-summer, both in bicentennial dress in recognition of the 200th anniversary of this nation. The train usually consists of one or two dome cars, two dining cars, a couple of baggage cars roll on the Alaska Railroad, since all passenger service is during daylight hours.

The units are almost the last remaining "F" passenger units in service in the U.S. They add class, beauty and dignity to a passenger train, in sharp contrast to the oversized box SDP 40s on Amtrak and the brute strength look of a chop-nose GP.

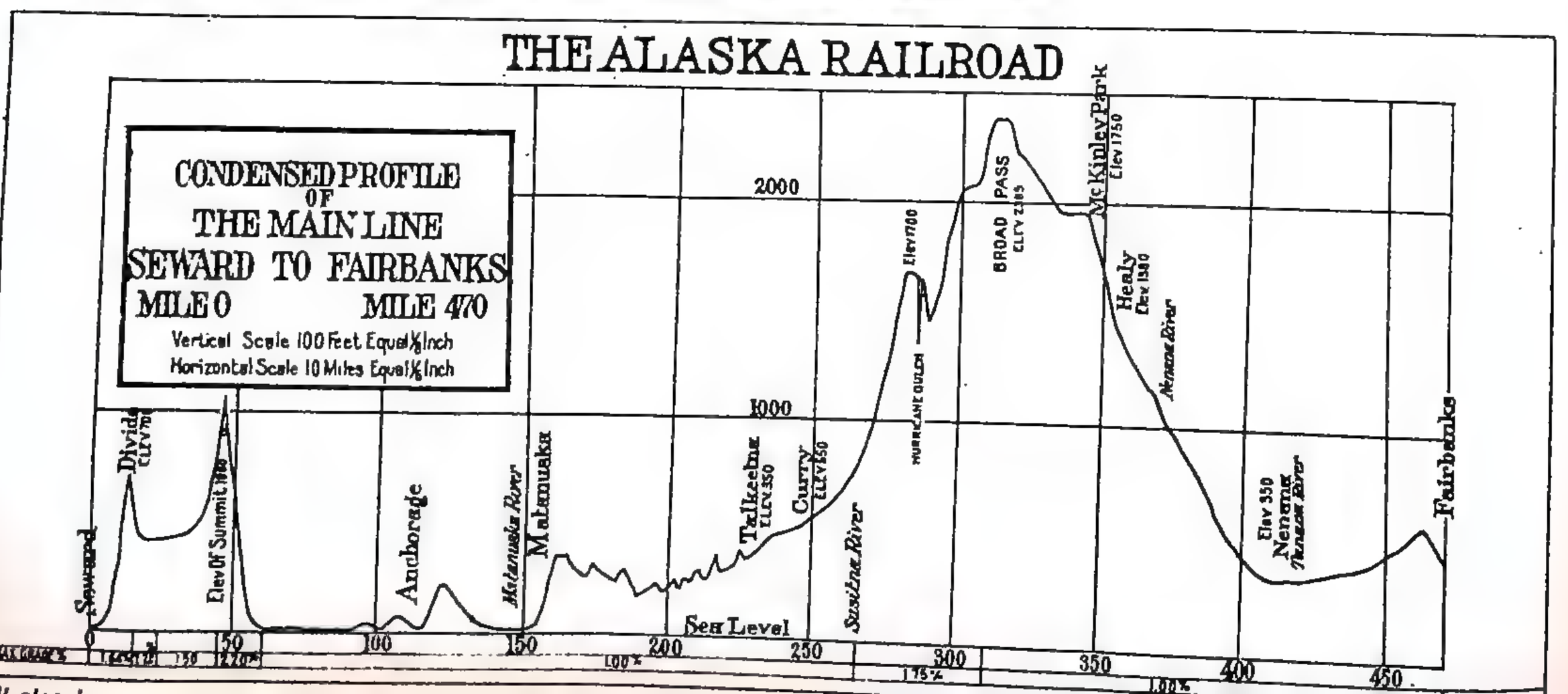
The leisurely trip is made even

Photos by the author

Train No. 6 reaches the divide at Summit, the highest point on the railroad.

No. 1510 stops at McKinley Park station in September. Soon the park will close for the winter and the train will go back to a twice a week schedule.

Hurricane is not a regular stop, but the locals are expert at flagging. The woman said "When I see her coming, I grab whatever I can and start waving, till the engineer blasts me off with his horn."



slower by the number of flag stops in the timetable. Six stops are included in the service to those communities, considered important, but the 40 or more flag stops contribute greatly to the 10½ hour pace. On each occasion, the train will make many of them depending upon the season. The holiday season will bring people out of the bush to go to Anchorage or Fairbanks to shop and the summer season will take people to the bush for fishing and camping.

But the train is an enrichment to the life and times of the people in the "Last Frontier." The traditions still linger, even in an age when railroading has given away to aviation and the jet age, when it comes to the glamour in the eyes of the youngsters. To the railroad, the flag stops are only a slight annoyance, a burden they would like to be relieved of, but the bush people are able to exert enough political pressure to keep the railroad from doing away with them.

A trip on this train is a lesson in geography and history. Soon after leaving Anchorage the train swings around Matanuska Jct., the home of the fertile rich large agricultural district, Matanuska Valley, where in the depths of the depression hardy people from the midwest carved out a good life from the inhospitable land . . . then goes through Wasilla, passes through Houston and Montana without stopping, stops briefly in Talkeetna to unload a few mountain climbers, leaps over the Chulitna River at Hurricane Gulch on a spectacular 918 ft. steel bridge 298 feet above river bed . . . and then reaches Honolulu.

There are some tongue twisting names in Alaska and one wonders who the humorist was that tacked them all over the map. None is quite so ironical as that of Honolulu, Alaska.

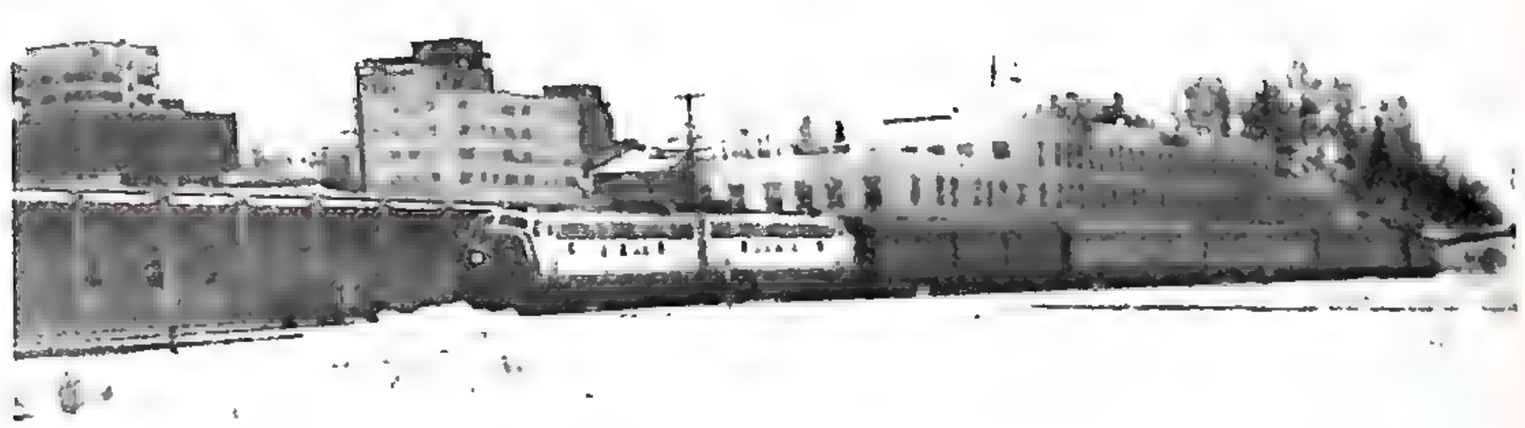
It is (or was) a small hamlet located 170 miles north of Anchorage, completely void of pineapples, hula girls or swaying palm trees. It abounds in icicles, snow and a few husky dogs. It is a real pain to the railroad, for it is one of the line's heaviest snow areas and oftentimes has six feet of snow, but it still provides good publicity. Alaska visitors look for it and, if the train stops, like to have their picture taken by the sign.

The siding of Colorado is passed and then suddenly you are in Broad Pass. The mountains open up into a huge valley and you feel as though you are going over the top of the world. The wide pass has snow capped mountains on all sides giving

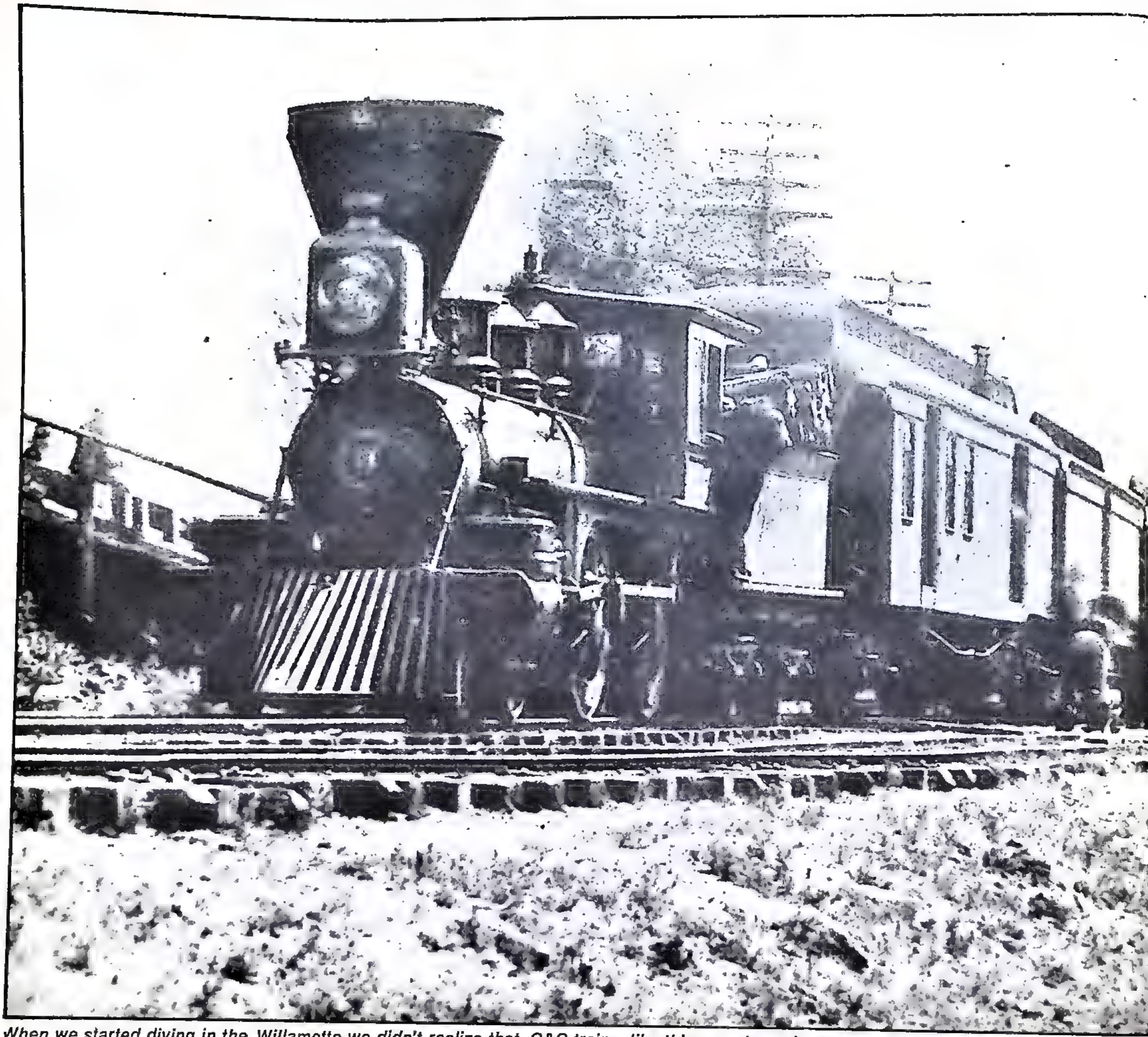
(Continued on page 76)

The AuRoRa has a full train including two domes on August 20, 1977, and fouls the mainline at both ends of the siding at Anchorage station.

Tour buses stand by at McKinley Park station, to take the train passengers into the park.



Winter is rapidly closing in on Anchorage in November, and there's barely enough light to trip the shutter, as the Alaska Railroad loads at 9 a.m.



When we started diving in the Willamette we didn't realize that O&C trains, like this one shown in Oregon City in the 1880s, had passed

At first I could feel the rumble of the oncoming train. Yes, feel rather than hear, for the water I was swimming in fairly vibrated with the concussions. Closer it came, with the rumble changing to discernible throbbing of a diesel locomotive and distinct clicking as the wheels struck rail joints. I was concerned lest the jolting loosen rocks that would come tumbling down the embankment into my underwater envorinment.

We had been about this strange undertaking for about a year. Tom Drynan had started it all with a phone call. "Hey, Jim, how about a diving trip? I know of a place where there is a train under water."

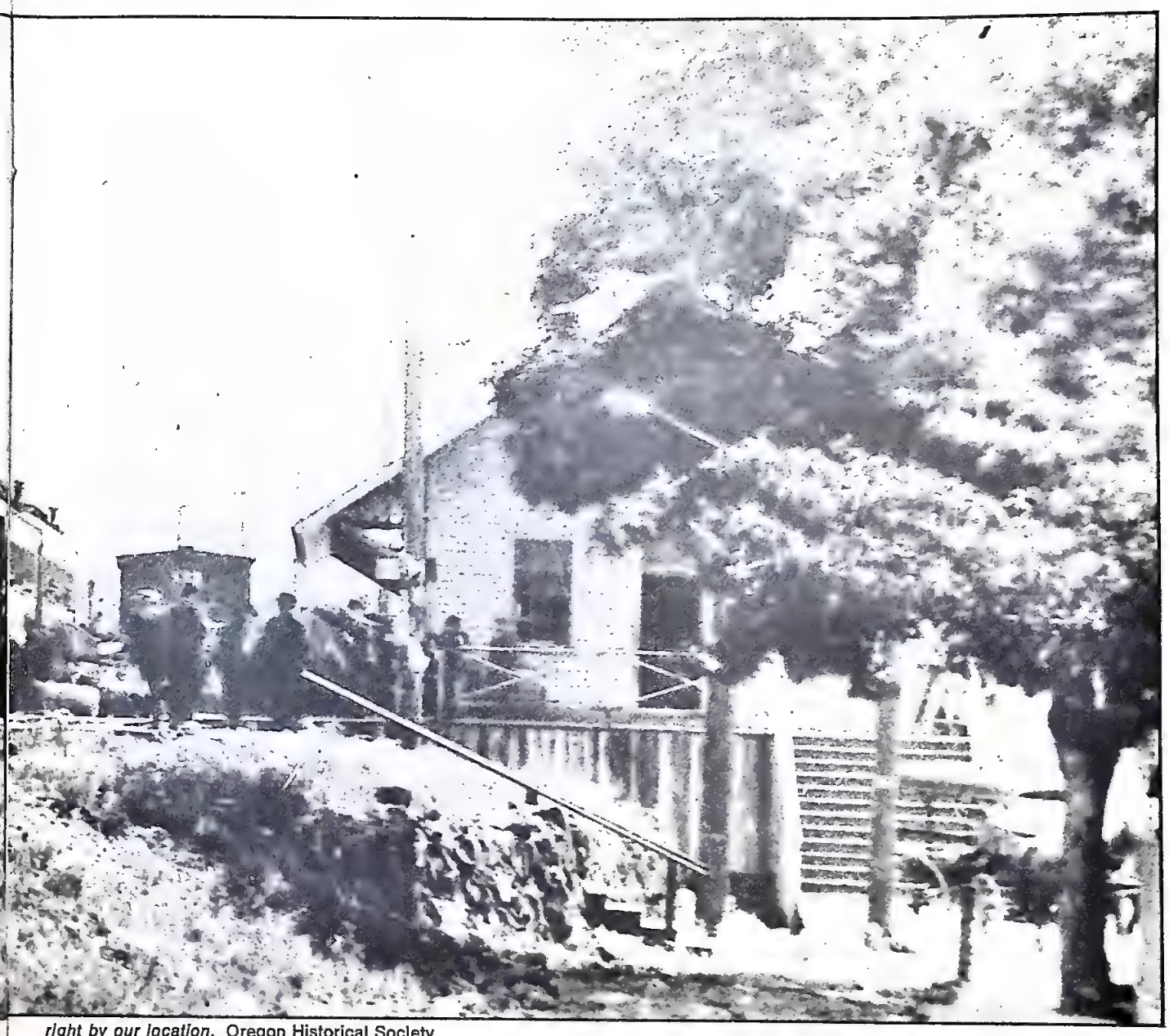
At first I was skeptical, but it might be worth checking out. "Where is that, Tom?"

"Woahink Lake, near Florence, on the Oregon coast. I talked to a fellow that said he had seen it while he was fishing."

Well, that wasn't far from home, and the water must be clear enough for good diving if a fisherman could see the cars from the surface. I gave a tentative "yes," then set about to check it out with the fisheries biologist that covered that district. He should know if anyone would, for it was his business to be familiar with every part of the environment in his area.

The response was enough to send us packing our diving gear. Yes, he, too, had seen railroad cars strewn down the side of the lake. It was unclear whether the locomotive was there, but he thought so. Besides, he could draw a map to guide us directly to the spot.

The day was bright and clear when Tom and I arrived at Woahink Lake. Conditions were almost too good to be true, for the scene was a diver's fantasy of mirror-like surface that reflected back the stately character of the Coastal Pines and



right by our location. Oregon Historical Society

RAILROAD DIVER

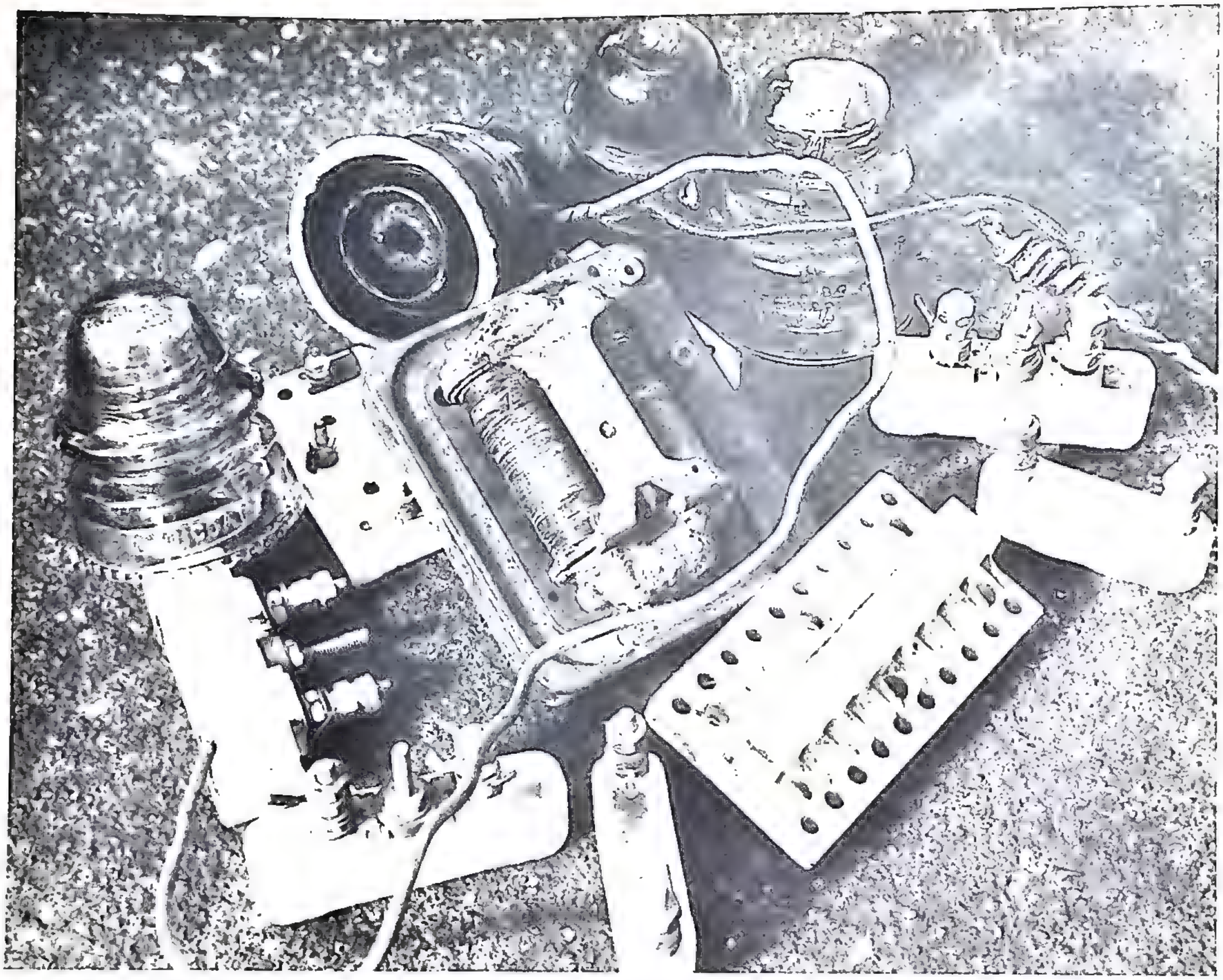
BY JAMES SEELEY WHITE

It's not the most common way to hunt for relics, but the rewards are quite surprising.

Fir trees spreading along the bank where mountainside and lake met. In the clear water, trout hovered like hunting hawks, then zipped away to snatch up their prey.

I was trembling as I loaded the underwater camera. Visions of an old wood-burning locomotive with bulbous smokestack leading a ghostly procession of cars across the lake had my mind boggled.

Around 1912 the Pacific Great Western Railway had attempted to build a route through this area to Coos Bay, south of Florence. Could this be one of their trains? Or one of the early ones of Southern Pa-



It was apparent, from the insulators, lightning arrestors, relay coils, and terminal blocks that the telegraph line had followed the railroad. The two center insulators are unmarked ceramic; the others, of glass, are embossed "PETTYCOAT" and "CALIFORNIA." The rectangular item is marked "W. U. TEL. CO. TERMINAL BLOCK No. 2."

cific, that bought out Pacific Great Western and completed the route in 1916? I had caught railroad fever, though I didn't recognize the symptoms at the time.

With the inflatable dive boat, we traveled across the lake, making the only ripples to be seen. We had the place to ourselves.

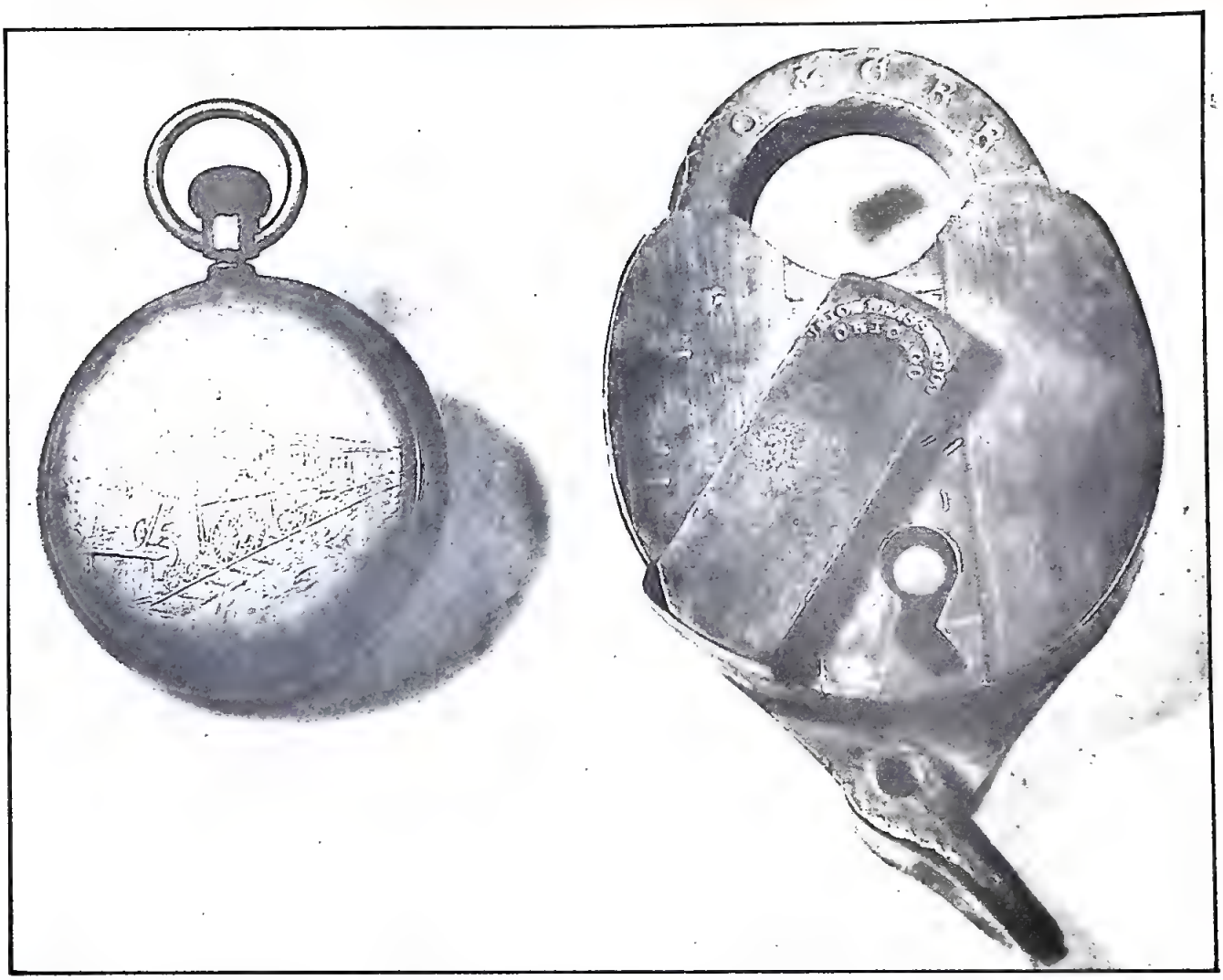
The hand-drawn map proved excellent, at least in relation to the land. Contours were readily recognizable, and landmarks to pinpoint the train appeared on schedule. This must be the spot, and there were dark objects below, though the slanting rays of early morning sun did not illuminate the lake bottom sufficiently to discern what they were.

Cold water shocked our systems as we plunged over the side. Nothing was visible of the train, but we had changed the position of the boat in order to take advantage of a large fallen tree as a mooring site. The descent began—and continued. Had we missed the location somehow?

Then they appeared. Forms protruded from the sloping wall of the lake in the darkness beneath us. However, they weren't what my visions had suggested. The objects were wooden beams and a few planked units that appeared more like sections of a small dock than railroad cars. And where was that locomotive?

The fisherman, and the biologist, had been correct. These were railroad cars, but unlike any I had ever seen outside of pictures. Flatcars for narrow-gauge use had been fashioned of heavy wooden beams with plank decking. Even the frames around the single-axle trucks at each

The author examines one of the Western Union terminal blocks he has just retrieved from the floor of the Willamette. Karen White



The two favorite railroad relics from diving are the engraved gold-plated railroad watch from the Nehalem and the O&CRR brass padlock found in the Willamette River.

end of the cars were of heavy beams. Farther down the slope stood a car with sideboards; others were overturned and broken, or had never possessed planking and sideboards.

These surely never belonged to Southern Pacific or Pacific Great Western. Photos of some cars used on the logging railroads of the Pacific Northwest in the 1870s and 1880s show what appear to be wooden frames, but I had noted only one example, from around 1875, that used single-axle trucks. The Willamette Pacific R. R. is known to have hauled logs in the Florence area, but that was not until 1911, and with relatively sophisticated equipment.

On down we went, still looking for the locomotive. A billowing trail of brown spread out behind us, something like the cloud of smoke from a straining steam locomotive, but our efforts were for nothing—the ghost engine had vanished. Visual scanning along the slope and onto the oozy floor was to no avail. Careful checking of the mud with metal detectors, in case a diminutive narrow-gauge loco had settled into the mud, revealed only a few slender rails.

Interesting as the rails and flatcars had been, the image of a steamer was still implanted in my mind. I had to seek fulfillment.

We went into the town of Florence and hunted up all the old-timers we could corner. Questioning left us with nothing explicit. Instead, we had two stories. One told of narrow-gauge railroading to bring logs from the virgin forests of an unexploited Coast Range, and a barge capsizing in a storm as the railroad was being shifted to a new, unlogged site. The other told of rail cars being used in the construction of the dam that stabilized the lake level, and dumped when the construction was completed. The latter seemed more believable, for the cars were very near the old dam.

All right, there were other places to look, other tales of ghost locomotives in our waterways. These turned out to be just ghosts, too. The one in Yaquina Bay, after I had sworn to give up the bell in exchange for the information, turned out to be a shallow mud flat without enough water to hide a single truck, let alone a whole engine. One had been in the Nehalem River, all right, but it, too, had slipped away. Iron castings, grooved and ridged fire bricks, and a huge circle a boiler plate studded with broken rivets showed where a wreck had occurred, but the ghost was gone.

Strangely, I was soon to glimpse the locomotive. We were still in the Nehalem River, but had given up the underwater railroading for the day, and were hunting old bottles in the channel. It was there, staring

Enamelware was so abundant in the river along the O&C right-of-way we concluded it must have been used in the kitchen car for the work train.

back up at me. No, not a whole, big locomotive, but its image engraved on a gold-plated railroad watch. Currents had swirled away the covering of silt, and the corrosion-resistant gold stood out in all of its shining glory, reflecting up the engraved image of the tall-stacked old "No. 12."

Of course the watch didn't run any more. As the case was opened, brass gears came tumbling out. Hands had turned to rusty water, the face was darkened curled fiber, but the frame that held the works was still clean and bore patent dates of '07, '08, '09, '10, and '11. Its purchase could well have coincided with the building of the Pacific Railroad and Navigation Company route from Portland into the Nehalem area, opening on October 13, 1911.

For a while, taking the watch out of the drawer occasionally and glancing at the image of Old No. 12 quieted my railroad fever. What brought on a relapse was field-testing a new line of Amphibian underwater metal detectors. The site selected for the test was supposed to be an old river port of the Willamette, a few miles upstream from Oregon City.

Some old bottles were found by just looking around, proving that the site contained items from previous human use. Now it was time to test the units, and see what they would detect in the silty river bottom.

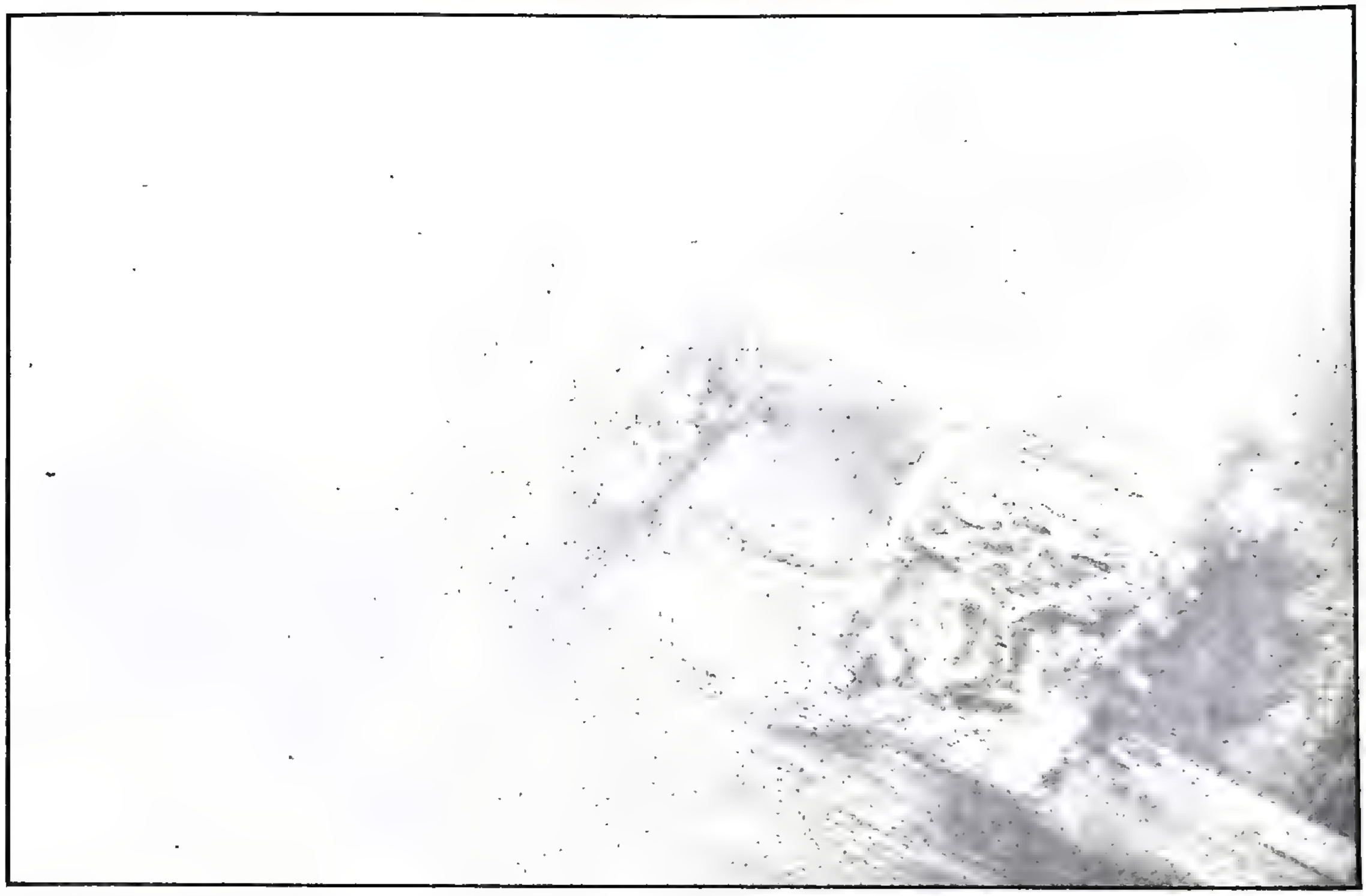
The first trials were going fairly systematically. The Amphibian detector located a metal button, some silverware, assorted bolts, and a padlock. I threw these into a bag and headed back to the dive boat to make my evaluation.

Most of the items withdrawn from the bag were of interest only to the extent that they showed the capability of the electronic instrument being tested. The last thing taken from the sack, probably because of its weight, was the padlock.

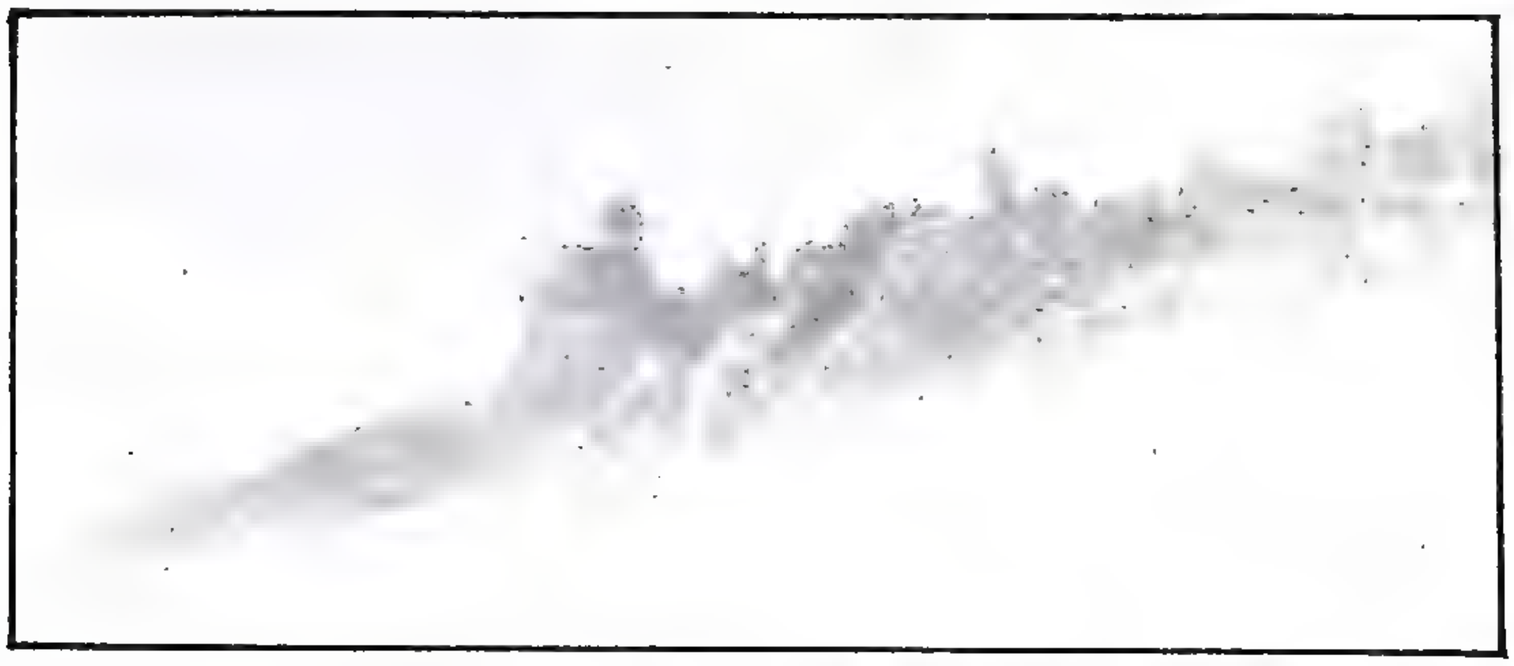
Interesting. It was made of brass, with a gate to protect the keyhole and a clevis at the lower end for a chain fastener. One wipe of the diving glove revealed printing stamped into the gate. "Union Brass Mfg. Co., Chicago," it read. Something else seemed stamped into the hasp. One more swipe with the glove—"O. & C. R. R."

As if to add impact to the realization, a train came thundering along the riverbank track into view. Southern Pacific stood out on the locomotive, but the right-of-way adjoining our test site was one SP had purchased in 1887. The original owner had been Ben Holladay's Oregon & California Railroad! The route before us had been in use since 1869.

We couldn't get back into the water fast enough. The search centered higher up the bank, out of the places where boats might have anchored, and onto the edges of the right-of-way where the O. & C. rails had skirted the port community. Now, with the thunder of passing trains pulsating through the liquid environment and into our bodies, we were finding spikes, telegraph insulators, lightning arresters, and other objects of railroad fever. Our final bag held: 2 Western Union terminal blocks, 2 relay coils, a red signal lens, a railroad lantern with a blue-green globe, an assortment of insulators, tie tamping tool, and flare pot. We surmised that work crews also used a lot of enamelware in the kitchen car, for enamel pans, cups, coffee pots, and dishes.



Strange, wooden-framed cars littered the side of Woahink Lake. This underwater view, taken at one end of an upright car, shows the heavy wooden beams enclosing the single axle.



Narrow-gauge rails, coated with freshwater sponges, protrude from the mud of the lake bottom.

Working along the railroad hasn't cured the urge. I will let others haunt the auctions and antique shops, though, for I heard of an abandoned section of right-of-way where a rusting always-open drawbridge stands farther up the Willamette River. I will do my railroad collecting there next time I have a free weekend.

A rusty brake wheel lies at the bottom of Oregon's Nehalem River, one of many evidences of a past train wreck.

SMOKY HILLS MA

BY LEE BERGLUND

The Missouri Pacific through Central Kansas provides for some up and down railroading.

INLINE

Photos by the author

Across the north central portion of the state of Kansas lies a geographical area known as the Smoky Hills. This area is rich in farming, cattle and oil and is traversed by the mainlines of three major railroads: the Rock Island mainline to Denver on the north; the Union Pacific's Kansas Division in the center; and the Missouri Pacific's mainline to Colorado on the south. The Smoky Hills region is comprised of a series of ranges of picturesque rolling hills, far from the flat as a billiard table stereotype that most people have concerning Kansas topography.

True enough, there is little in the way of large vegetation in the Smoky Hills: grasses are the dominant vegetation; the scattered trees are foreigners imported and planted by settlers over the past hundred years or so. This area is also known as post rock country because in the early years the settlers were forced to cut their fenceposts from the native limestone outcroppings found in the area due to the lack of native timber. Thousands of the massive yellow limestone fenceposts still dot the region, and many are still in use by present day landowners since they are practically indestructible.

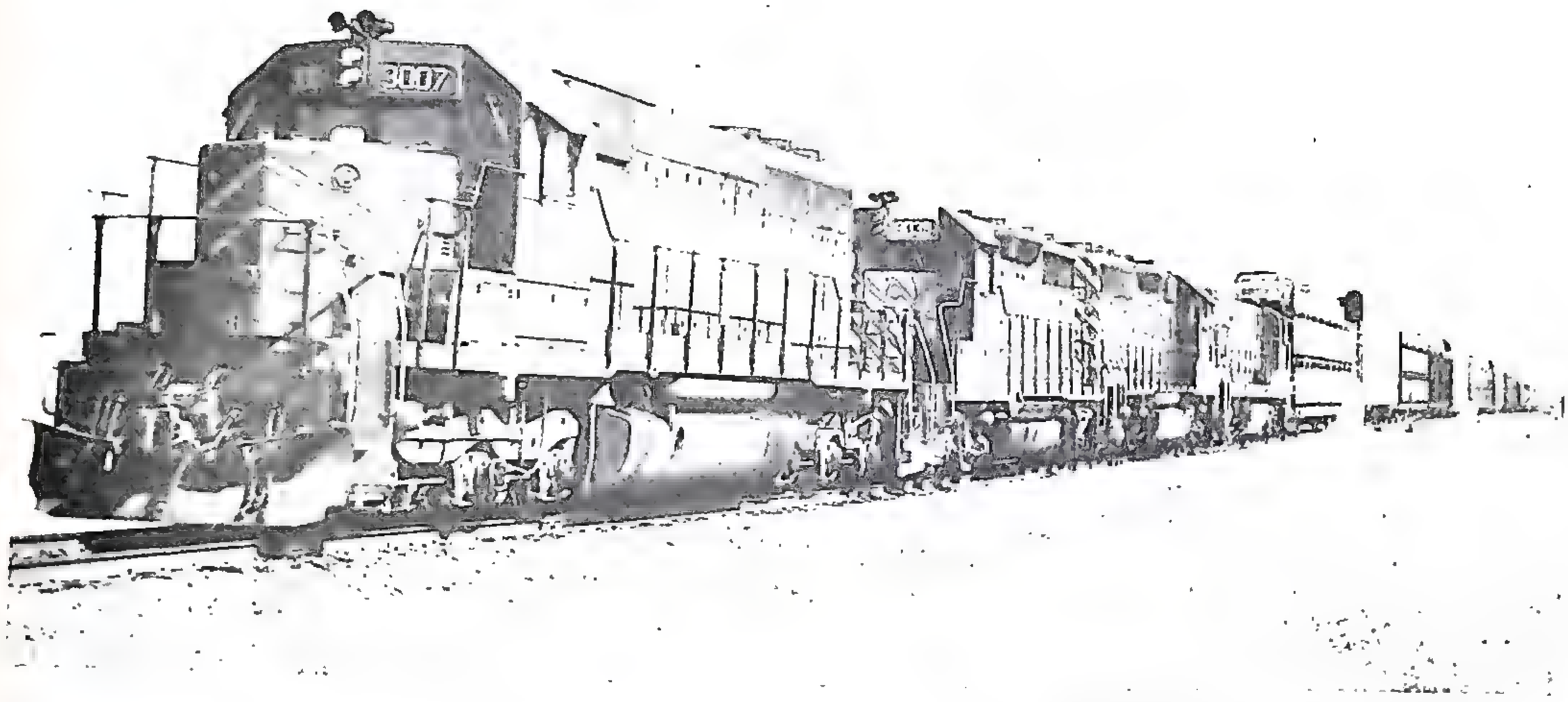
The Missouri Pacific's Kansas Division, Western District, mainline across the southern portion of the Smoky Hills traverses some of the hilliest portions of central Kansas. Grades and curves are the rule in both directions out of Hoisington, Kansas, the MP's crew change point in the middle of post rock country. Hoisington is an interesting place to watch and photograph MoPac mainline activity today although traffic is fairly light with an average of six mainline trains and one local during any given 24 hour period. One could expect to see around three or four trains during daylight hours on a typical railfan trip to the Hoisington area. The hills and curves of the area make for some very nice photo spots at various times of the day.

Hoisington lies in the bottom of a valley and the railroad has to contend with steep grades in both directions to climb out of the valley. About six miles west of Hoisington lies Boyd Hill, named for the tiny community of Boyd at the foot of the hill. Present day Boyd is mostly just a siding with a small grain elevator; it probably had several houses and a store or two in earlier times.

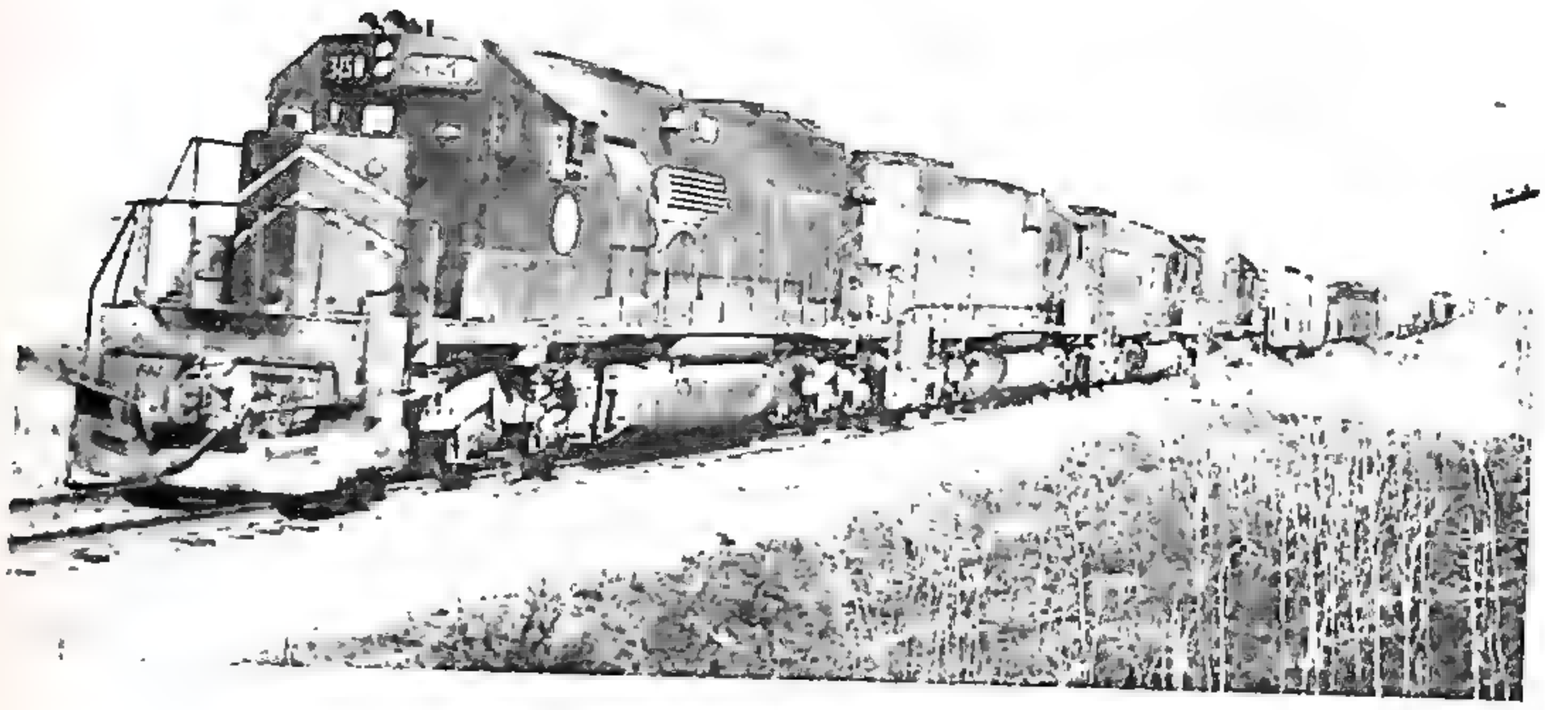
When the railroad was built the hill proved to be too steep to lay the rails directly up and over so the line had to swing to the south to gain elevation gradually before swinging back west and over the crest of the hill. At one point the rails on Boyd hill are pointing almost due south. Going further to the west a series of smaller hills and curves follows with short but steep grades between the hills that do not present too much of a problem because the grades are short enough that inertia will carry the trains over them. The roller coaster profile of the tracks west of Boyd Hill does couse continual problems for engineers in controlling slack in the trains, however,

SD-40 3155 and two other units struggle eastbound up Cheyenne hill in the 8th notch and making 5 mph with an extra long freight.

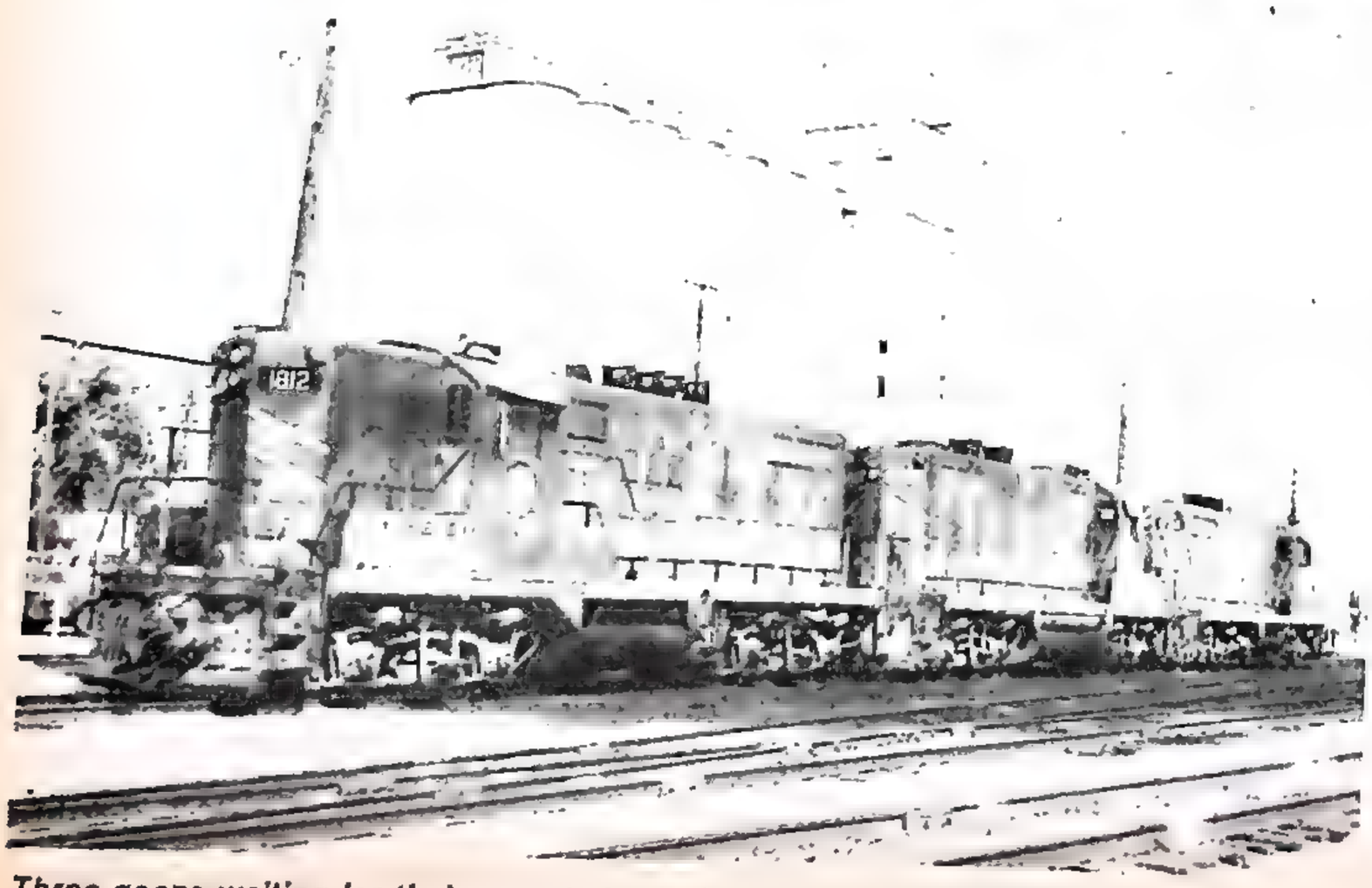
The big grain elevator on the left and the MP freight depot on the right were the primary reason for the existence of the Great Bend branch in the 1960s. Both are now served by trucks, the branch is gone.



SD-40 3007 leads two leased D&RGW units west at Olmitz. A number of Rio Grande GP35 and GP40s were leased by the MP for a while in early 1978.



SD40 3158 carried C&EI sublettering and all units were still wearing "screaming eagle" paint 10/75 west of Olmitz. Three and four unit lashups are most common on this line.



Three geeps waiting for their crew to be called typify the motive power currently used on Hoisington locals.

and pulled drawbars seem to be a rather common occurrence.

The track is well maintained and high speeds are the rule in spite of the hills and curves. Westbound trains usually get a fair run at Boyd Hill in the six miles from Hoisington to the foot of the hill and present day diesel lashups roar up and over the hill without much trouble, although the engines are really working hard by the time they reach the crest, especially on long and heavy trains. 100 car trains are very common on this line.

Going east out of Hoisington conditions are much the same. The big grade east of town is called Cheyenne Hill; the tracks pass through the little town of Redwing and again have to swing to the south to gain elevation before cresting the hill. Cheyenne Hill is steep enough that a deep cut was required in the top of the hill to hold the grade to a reasonable figure. East of Cheyenne Hill the topography is a little flatter than that to the west, but shorter inertia grades still abound and high speed is still the rule.

I have paced trains from Cheyenne Hill into Hoisington many times since Highway K-4 parallels the tracks for most of the distance and 60 to 70 mph is not at all uncommon for

Mixed diesel lashups were quite common for a while in the early 1970s. Here MP GP35 667 leads a UP U30C and a NW GP40 west out of Hoisington in November, 1973.

A U23B roars through Boyd, prior to ascending Boyd Hill in December of 1975.

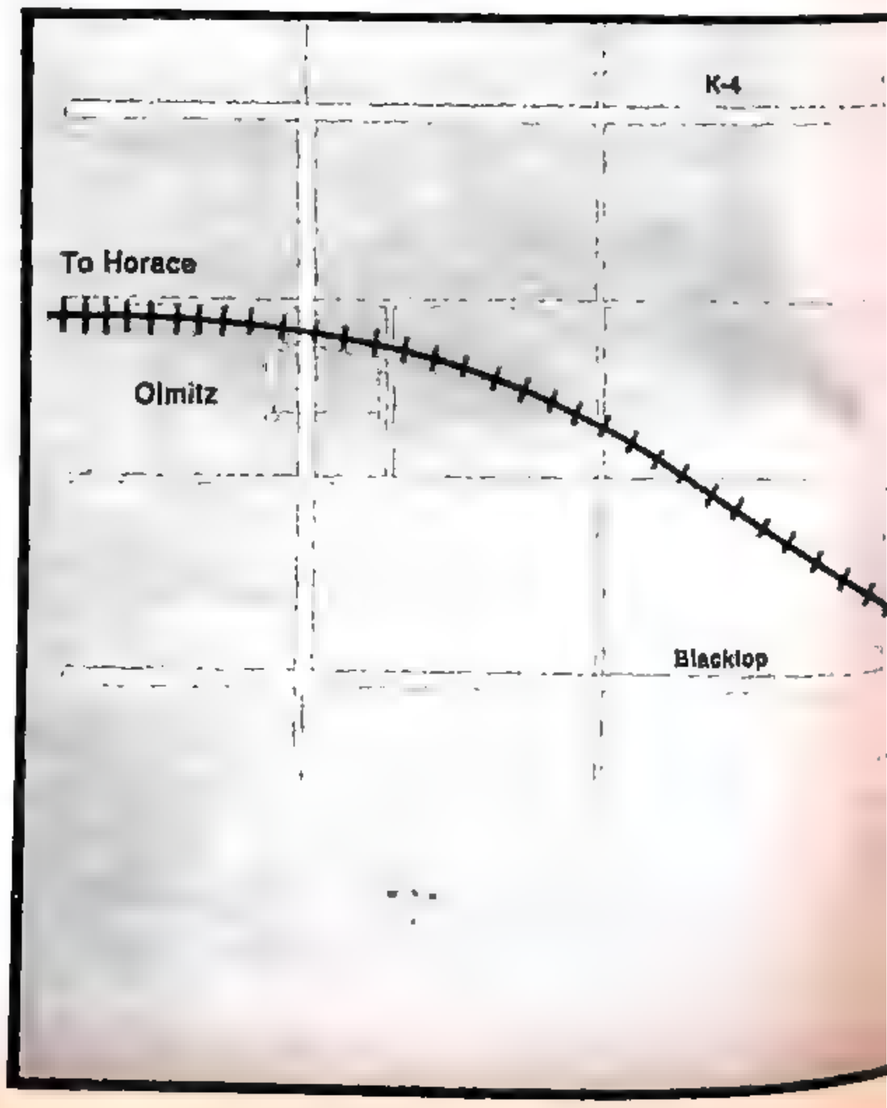
Three westbounds pause at Hoisington; 2265 and 3158 are mainline freights, 1646 is a local.

trains going down the hill. No paved roads follow the tracks west of town so pacing there is not possible, but I am sure the speed of trains coming off of Boyd Hill would compare to that of those coming off of Cheyenne Hill.

Hoisington is a crew change point and crews run from Hoisington west about 170 miles to Horace, KS, the next crew change point a few miles from the Colorado border. From Horace, trains go west to Pueblo, Colorado, the MoPac's western terminus. Crews go east out of Hoisington to Council Grove, Kansas, about 150 miles away. Two locals are operated out of Hoisington: one goes west to Horace, the other goes east to Council Grove. The locals run out one day and back the next, doing all the on-line switching during their run as well as switching the Hoisington yards.

Hoisington has a large yard that is seldom full these days except during the yearly wheat harvest rush when empty grain cars are stored there to await transfer to the on-line grain elevators in the area. Diesel fueling facilities are located here as well as a small car repair shop. The Kansas Division mainline is fully protected with automatic block signals that use three-light targets.

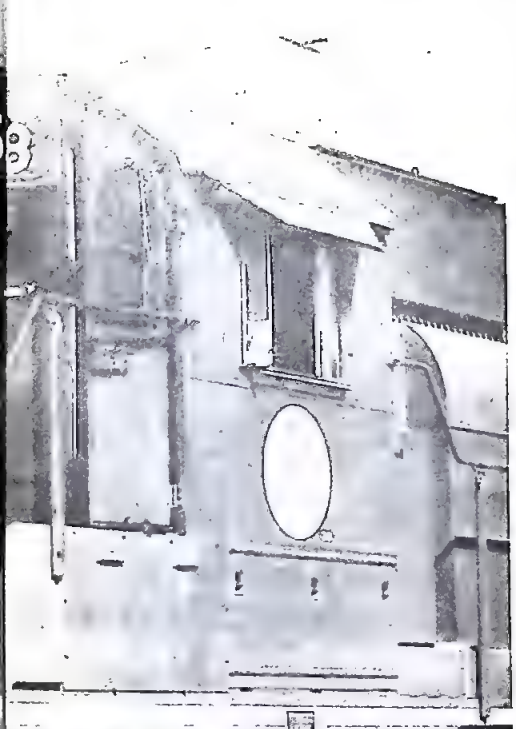
In steam days Hoisington was the location of the second largest backshop on the MoPac system, but when steam bowed out, so did the Hoisington shops. All that remains of the steam facilities today is a large brick shop building that is currently used

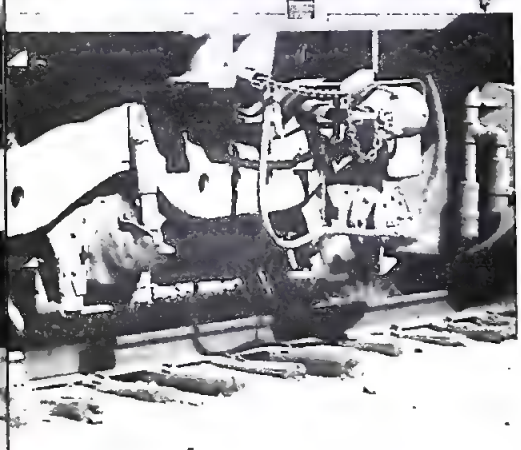


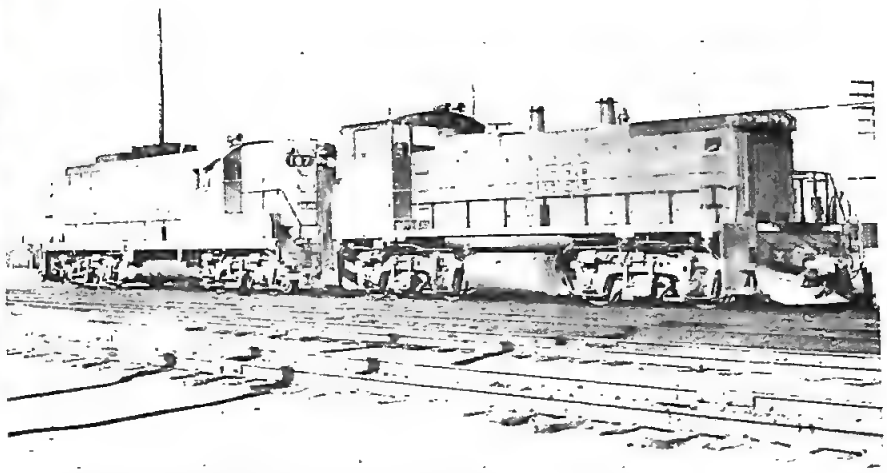
by a firm that builds steel oil storage tanks and a wooden steam roundhouse that is abandoned and slowly returning to mother earth. Steam helpers were employed in both directions from Hoisington for many years but diesels obviated the need for helpers to get trains out of the valley.

A short branch once extended from Hoisington south to Great Bend, a distance of about ten miles. This branch was abandoned and the track removed around 1970 except for a short spur to a brickyard just south of Hoisington. The branch served a large grain elevator and several warehouse firms as well as the MP's own freight depot in Great Bend. The MP branch tracks came within a few city blocks of the Santa Fe line through Great Bend, but the two roads did not have an interchange there.

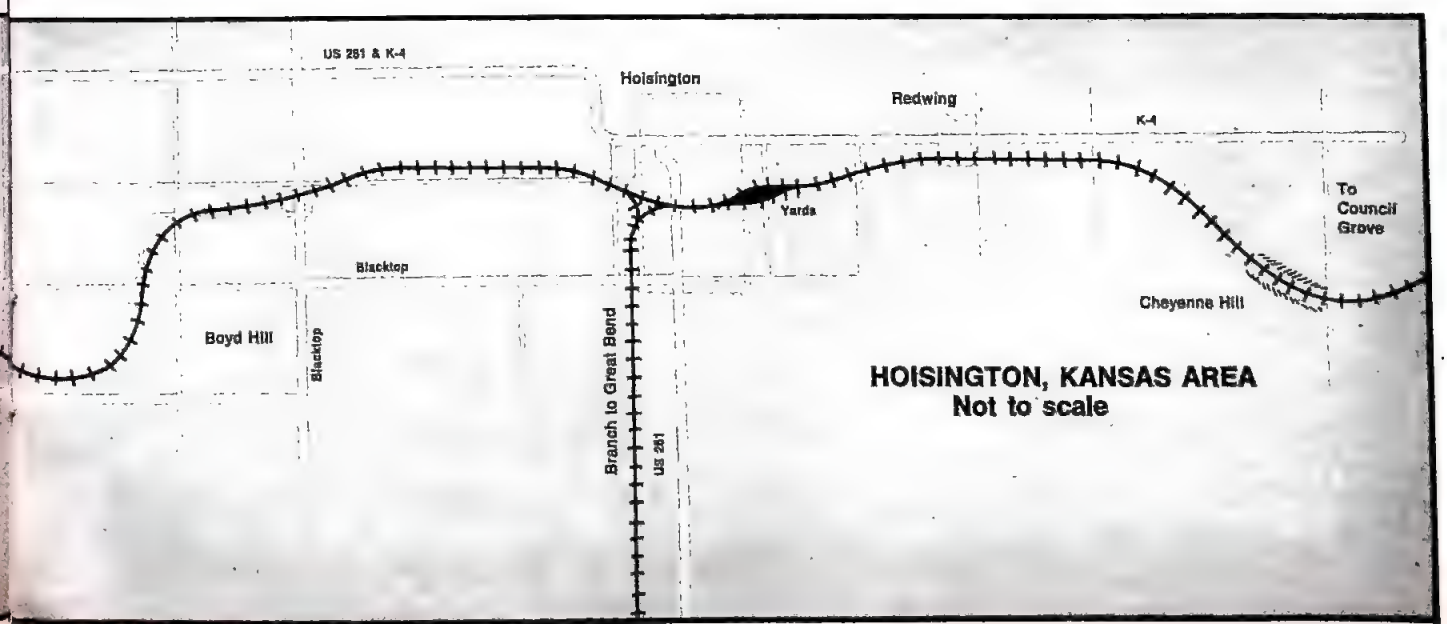
In the mid-1960's a yard switcher was assigned to Hoisington to perform yard duties and make the branchline run to Great Bend. The switcher was usually one of the MP's "GP-12" re-engined Alco RS-3s. An ex-Midland Valley caboose, still in MV colors was kept at Hoisington and was used by the switcher for the branchline run to Great Bend. After the Hoisington yard switcher was cut off, yard duties and the branchline run to Great Bend were handled by the Hoisington-Horace local prior to its departure to the west. During the last days of operation of the branch it was not uncommon to see a three unit lashup of geeps or F-units haul a single box car to Great Bend. Since the branch was abandoned,





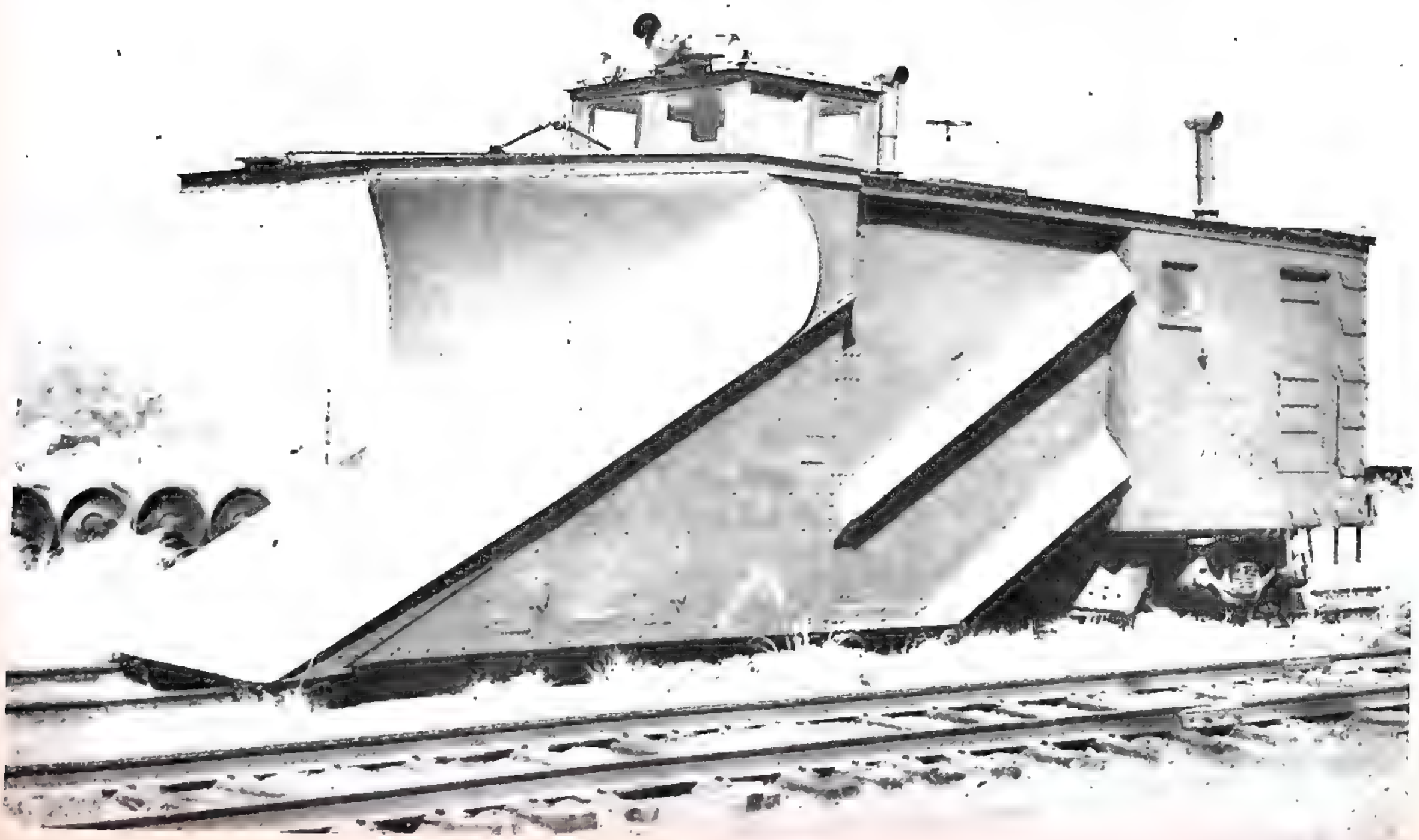


MP15/GP7 lashups were rather strange looking, but quite common for a while on the Hoisington locals.



GP38 2122 is about halfway up Boyd Hill at this photo location. The second unit is a GP35, a rather rare visitor to this part of the MP system.
Lee Berglund photo

This classic wedge plow has been stationed at Holsington for many years. Blade is painted bright orange, rest of carbody is box car brown.



MP's roller coaster profile is evident in this photo of a typical westbound near Olmitz.

F-units were getting scarce on the MP when this photo was made of the local leaving Great Bend in July 1968 prior to abandonment of this branch.

the grain elevator is served by trucks and the MP freight depot remains open, served by MP's own truck line.

The locals out of Hoisington usually have two or three units of the smaller 4-axle types. GP-7, GP-9, GP-18, and GP-38 types are most common today, but for a while some of the road's SW-1500 and MP-15 switchers ran the locals, oftentimes they were mixed with geeps to make a strange looking lashup for mainline use. Apparently they were too light for local service because they were later transferred elsewhere and the regular geeps returned to the locals. Lately some of the new G-15-1s have shown up on the locals.

F-units were gone from this portion of the MP since around 1970, the last one I saw here was the 924 on the local around that time. The F's did last for several years after that but they were assigned to other portions of the MP system. I have also seen a couple of the "GP-16" re-engined Alco RS-11s out here on the locals, but their visits were very brief and very rare.

Current mainline power to be seen in the Hoisington area consists primarily of EMD GP 38 and SD 40 and GE U23B and U30C types, usually in three unit lashups. Four unit lashups are occasionally seen here, five or more units are relatively rare. Smaller 4-axle power of GP-7, GP-9, and GP-18 types is freely intermixed with the bigger units on many mainline trains. GP-35s are very rare here, but the two GP-28s show up from time to time.

MP passenger service has been gone from this line since the mid-60's when the *Colorado Eagle* was discontinued. Also PA's and EMD E-units powered this classic blue and grey train during its existence.

Prior to second generation diesels the primary freight power across the Kansas division was EMD F-units and Alco freighters plus the ubiquitous EMD Geeps, all in the former blue and grey paint scheme. MP had EMD FT, F-3, and F-7 types as well as Alco FA-1/FB-1, FA-2/FB-2, and even some passenger equipped FPA-2s. The Alco FA/FBs were traded in early on EMD GP-18s that still roll off the miles on trucks from the traded in Alcos. The EMD F-units saw many more years of service than the Alcos and most got the later solid blue paint before being traded in on newer power. Of course, the EMD geeps are still around, little changed except for having been repainted and renumbered several times over the years.

In the early 1970s the MP experienced a motive power shortage and also entered into pooling arrangements with several other roads and this brought a number of unusual locomotives to central Kansas. Leased B&O GP-30 and GP-40s and pooled N&W and UP units were a common sight at Hoisington for a time. I even saw a Southern high hood SD-35 lead a MP lashup out of Hoisington one time. Today most of the power seen at Hoisington will be pure MoPac. The leased units are now gone and most of the pool arrangements are no longer in effect so the motive power to be seen currently will hold few surprises in a visit to the area.

All trains stop at Hoisington to change crews and next to the depot is a good spot to get unit shots while the trains are stopped or rolling slowly past. Meets between two or more trains are common at Hoisington. Mainline trains are sometimes fueled here, especially if the lashup has any 4-axle units in it. Lashups of six axle power usually run on through without fueling. Local power is usually tied up in a good photo spot next to the fuel racks adjacent to the depot. A little used but very nice looking wedge snowplow with fully enclosed body, cupola, and wings is kept at Hoisington next to the car shops. A steam powered wrecking derrick was once kept here but it disappeared several years ago.

The tracks are easily accessible in the area, mostly on dirt roads. Many good photo locations can be found in either direction from Hoisington depending on the time of year and sun angles for the time of day. In general, photography is best during late fall, winter, and early spring almost anywhere along this line due to lower sun angles during those seasons. Midsummer is very poor for photos here since the tracks are basically east-west and the sun is directly overhead for a large part of the day at that time of year. There are a few good photo spots where good midsummer photos are possible due to curvature of the tracks away from the east-west direction, however.

Although traffic is not as heavy as on other parts of the system, the Kansas Division trackage across the Smoky Hills around Hoisington, Kansas, is an interesting part of the current Missouri Pacific's operation.

STEAM ON

THE CHESSIE

Railroad fans, for the most part, are obviously quite taken by steam locomotives in operation, but the railroads have discovered that the general public feels the same way.

The Union Pacific has known that for years and accommodates the public with the spectacular, if infrequent operation of the #8444, and the Southern Railway has made the steam train an important part of their total operation.

When the American Freedom Train made its two-year journey, often the ex-Southern Pacific #4449 was more of a drawing card than the displays inside the cars.

Probably no one man has done as much to keep steam running as Ross E. Rowland, Jr., the owner of the ex-Reading Railroad #2101. It has been used on numerous excursions, was the power of the American Freedom Train through much of the east, and is now in service pulling the Chessie Steam Special.

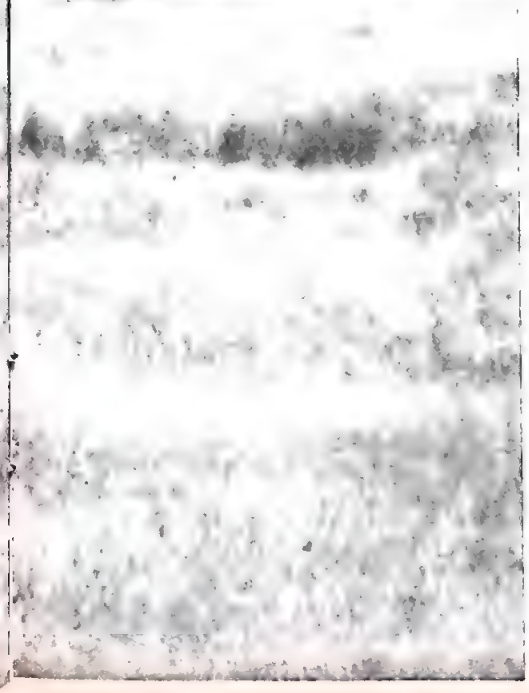
The Chessie's tourist train began as a one year only operation to celebrate the railroad's (read Baltimore & Ohio) 150th birthday. But the trips proved so popular that the Chessie has extended them to an indefinite period.

We present here a capsule look at the train and some of its wanderings.

PHOTOGRAPHY BY VANCE ROTH

In the yards at New Castle, Pennsylvania, the 4-8-4 prepares to go get her train.

A 4-8-4 in black, orange and yellow carries the railroad's banner proudly.

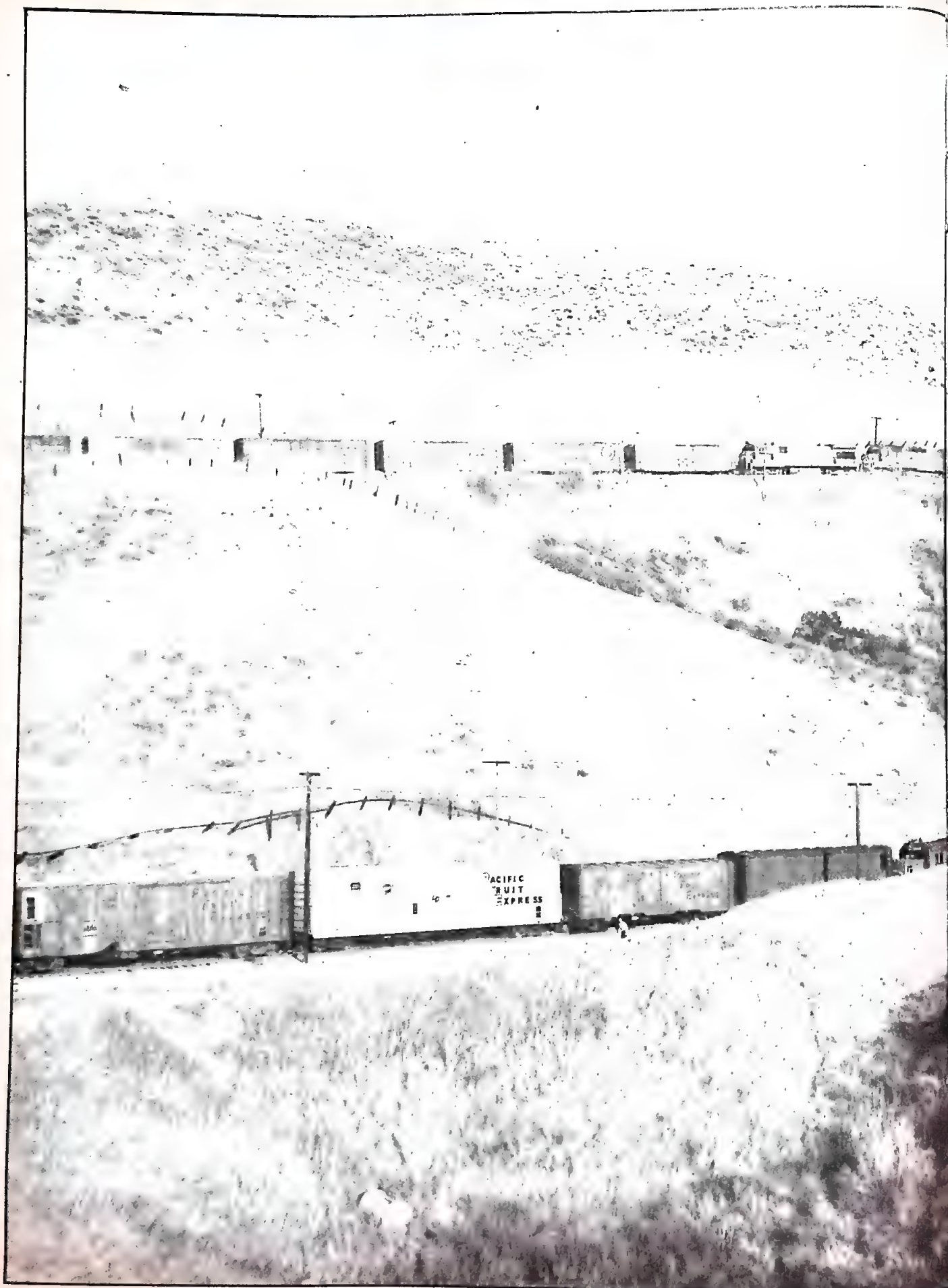


With an auxiliary tender, the ex-Reading locomotive rolls through Peninsula, Ohio.

The #2101 poses at night alongside ex-GTW #4070, owned by the Midwest Historical Railway Foundation, in Cleveland, June 22, 1977.

CHESSIE STEAM SPECIAL

PC 100


ACIFIC
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CUESTA PASS: The Coast Line's Big Hill

"If someone says he's in trouble on the hill, we know just where he is." . . . *M. L. "Bud" Park, Assistant Trainmaster, Southern Pacific, San Luis Obispo, California*

BY WILLIAM D. MIDDLETON

Photos by the author

There were no easy routes into Southern California for the main line railroads of the West. Santa Fe and Union Pacific make it from the east by way of the Mojave Desert and the severe grades of Cajon Pass. From the east, Southern Pacific's Sunset Line comes in through the Imperial Valley and over the long Beaumont Hill grind, while SP's principal route from the north comes down out of the San Joaquin Valley by way of the toughest approach of them all, through Tehachapi Pass.

All of these routes to the Southern California coast were already in place when Southern Pacific completed yet another route linking Los Angeles with San Francisco and northern California by way of the Pacific coast.

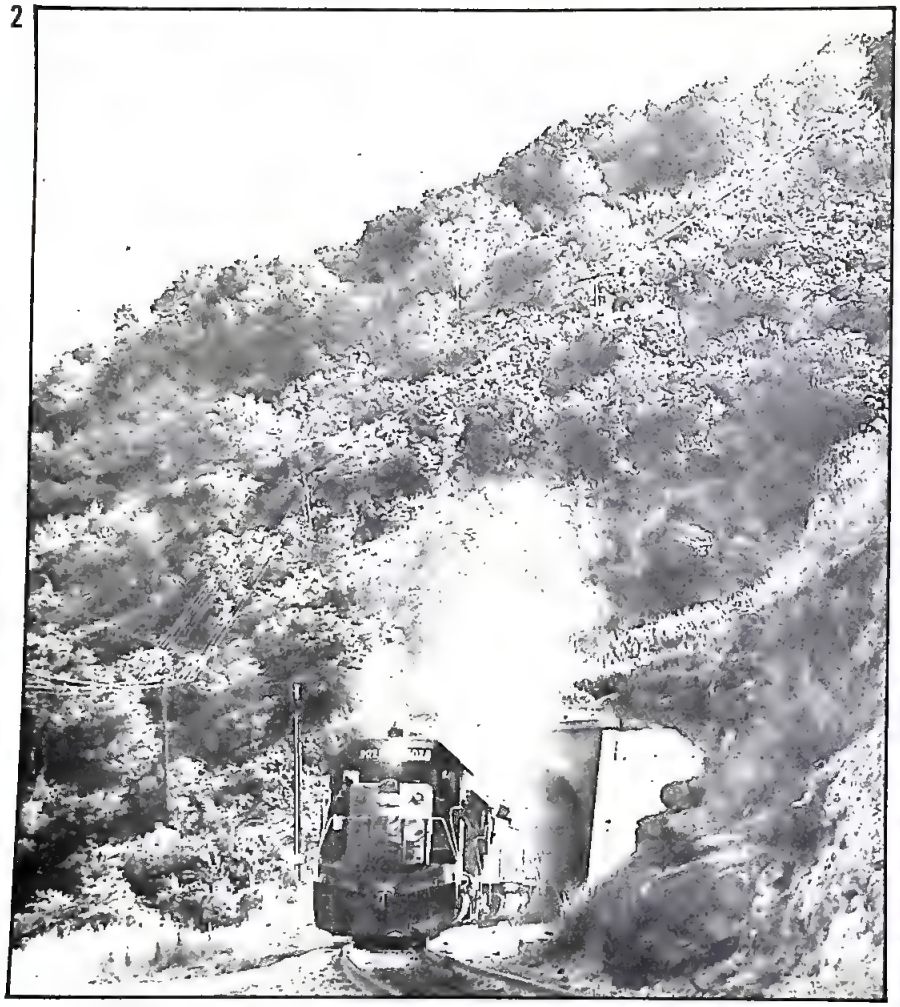
A portion of this Coast Line route, extending some 142 miles southward from San Francisco to Soledad, had opened as early as 1873, and trains were running northward from Los Angeles as far as Santa Barbara by 1887. But it was not until 1901, fully a quarter of a century after the opening of SP's San Joaquin Valley

Having helped a westbound freight over the hill, a four-unit string of helpers headed by Cotton Belt SD45T-2 unit 9279 dives under the Coast Highway at Cuesta, near the summit of the pass, on the way back to San Luis Obispo from Santa Margarita.

A three-unit mix of SD45, SD45T-2, and U36C, aided by a three-unit mid-train helper, heads a 93-car symbol freight through the Goldtree wye, and then around the horseshoe curve and past Chorro siding.

1

2



San Luis Obispo gets all of its Amtrak passenger activity during the early afternoon, when both north- and southbound COAST STARLIGHT'S pause briefly for crew change and servicing stops. While the train was serviced the Amtrak agent took care of the baggage, then the SDP40Fs accelerated the train up into the Pass.

1

With the end of the long climb to the Cuesta Pass summit almost in hand, a westbound symbol freight bursts out of the 1360-foot Tunnel 7 in August 1974. SD45 No. 9026 leads the four-unit road engine. Four more units at mid-train help to lift the 91-car train up the 2.2 percent grade.

2

Line, that the entire Coast Line route was completed and trains running through between San Francisco and Los Angeles.

By far the most formidable obstacle to the completion of SP's coastal California line had been the Santa Lucia Mountains, which separated the line's northern segment in the Salinas Valley from which SP had pushed northward through Santa Barbara along the edge of the Pacific.

SP's engineers elected to cross the Santa Lucias through Cuesta Pass, just north of San Luis Obispo, and it proved to be no small

The westbound COAST STARLIGHT on a spring afternoon in 1974 came thundering up through the curve at Chorro on its way to the Bay Area and Seattle. A special treat was one of the last remaining F-units on Amtrak's roster, tucked in behind the SDPs.

construction task. The railroad's final 17-mile alignment through the Pass required eight tunnels (since reduced to five), maximum grades of 2.2 percent in both directions, and—just above Steiner Creek—a great horseshoe curve.

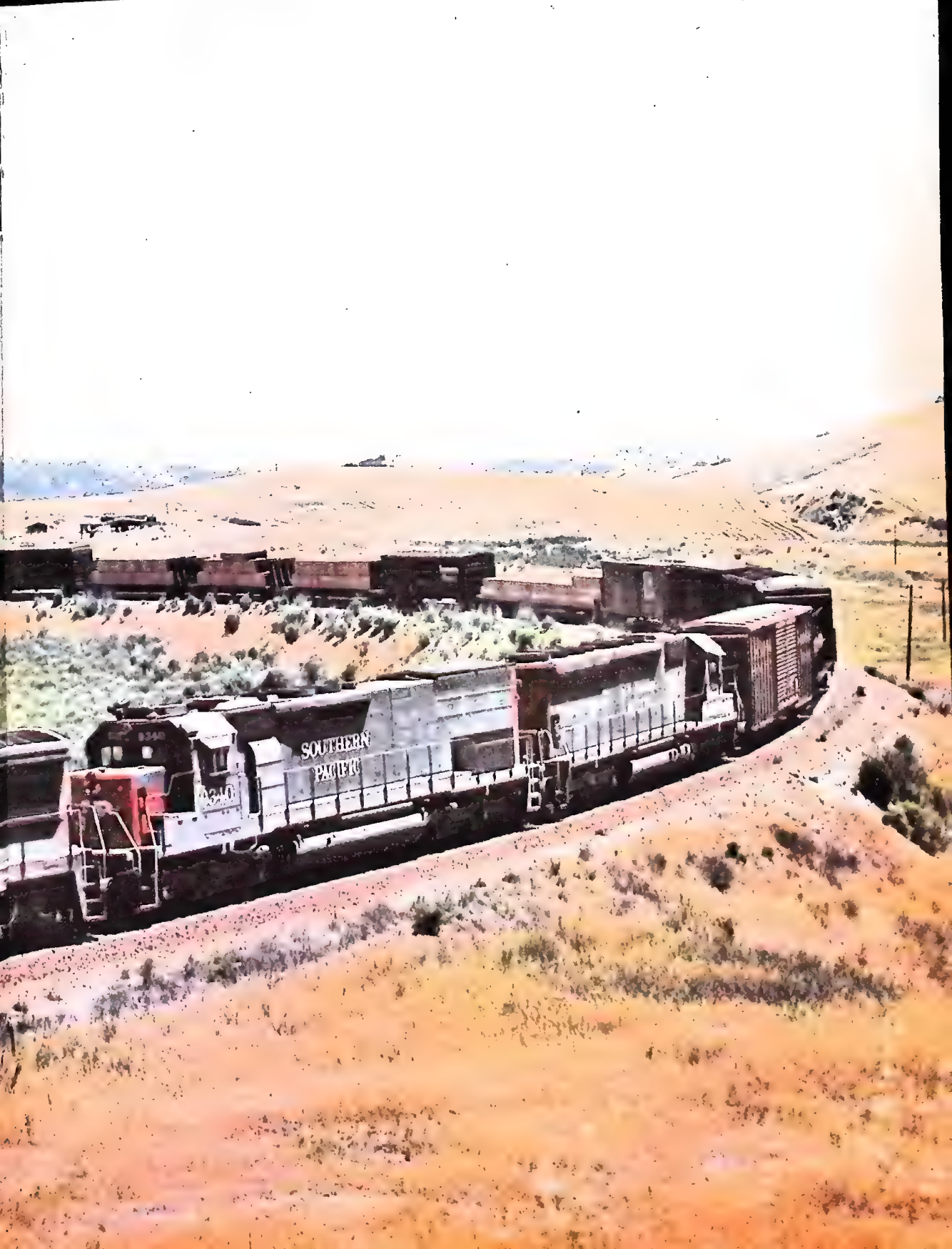
SP spent almost two million 1890's dollars on the work, which occupied the efforts of some 2,000 Chinese laborers for nearly two years from 1892 to 1894. More than a million cubic yards of rock were blasted out of the Santa Lucia Mountains in only 17 months to bore the eight tunnels.

Cuesta Pass was the toughest part of the Coast Line to build, and it remains today the toughest part of the line to operate, notwithstanding the aid of such contemporary railroading technology as diesels, CTC, and train radio.

Apart from Amtrak's daily Los Angeles-Seattle *Coast Starlight,* which moves over the hill in both directions each afternoon, Cuesta Pass is strictly freight territory. While the San Joaquin Valley line is SP's principal north-south route in California, the Coast Line also handles a substantial share of the railroad's tonnage moving between northern and southern California.

(Following pages).
From a knoll overlooking the nearly 10 degree curve at the middle of Cuesta's horseshoe curve, the camera recorded the descent of 93 cars of eastbound freight into San Luis Obispo in the spring of 1974. Three SD45 units powered the train, while an SD45, and SD45T-2, and a GE U36C aided as a mid-train helper.

SOUTHERN PACIFIC
8602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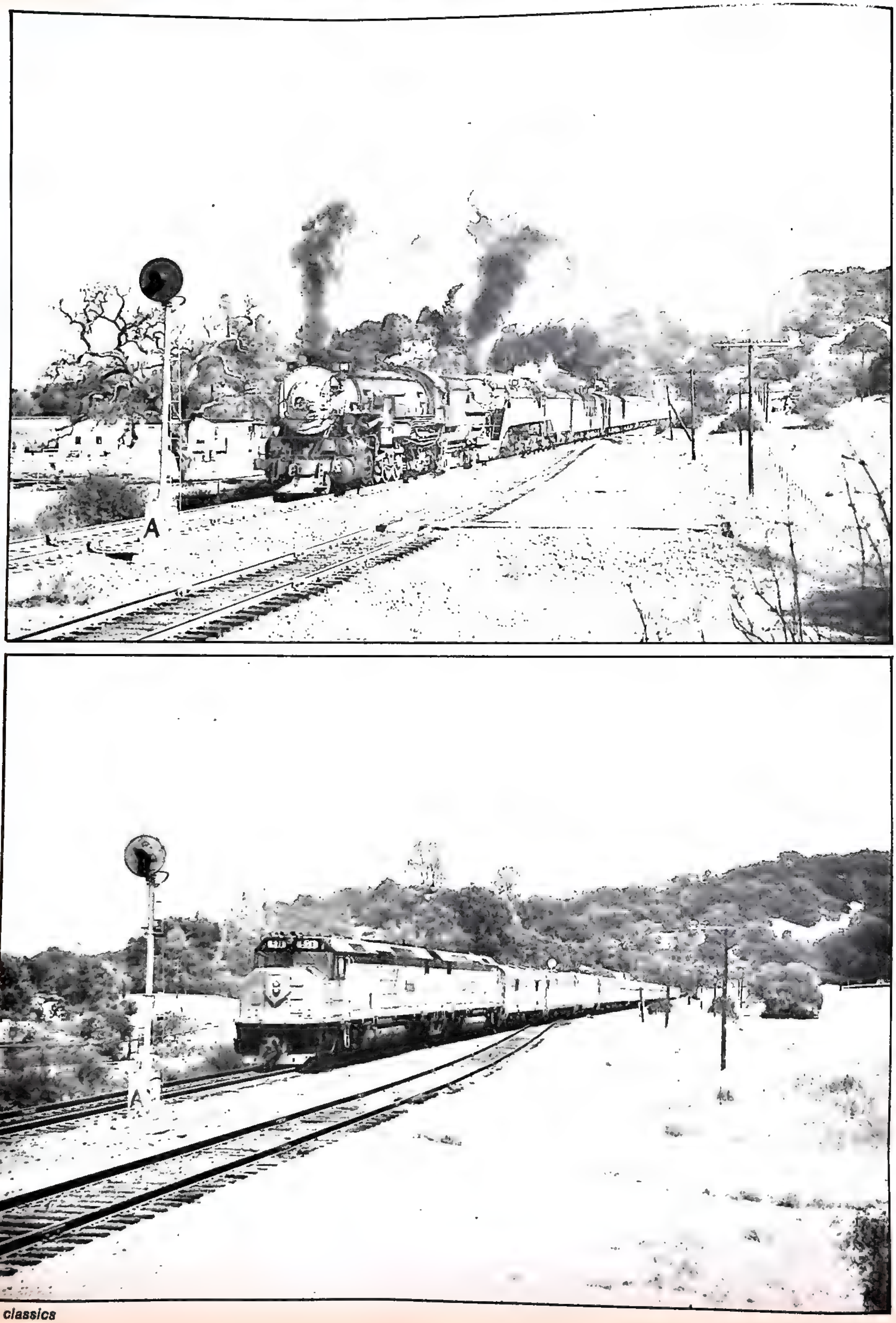
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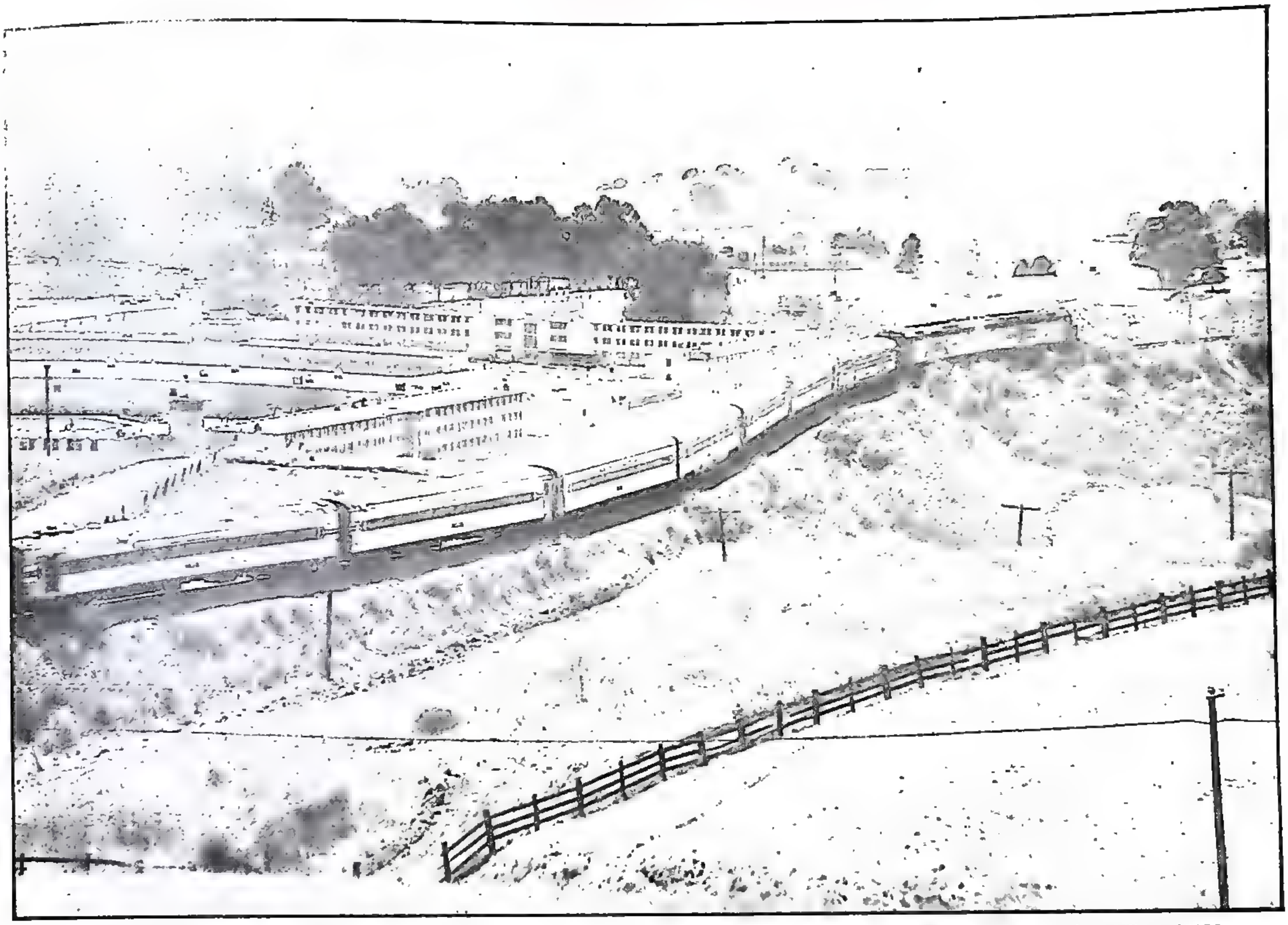


What a difference 24 years makes . . . My first Cuesta Pass photograph was taken rather hastily on a Sunday afternoon in January 1951. Unfamiliar with the terrain, I almost missed my quarry, the Los Angeles-bound COAST DAYLIGHT. At the last moment I pulled off the Coast Highway and scrambled up an embankment, arriving at the lower end of Cuesta siding just in time to photograph the thunderous passage of 2-10-2 helper No. 3699 leading the charge of GS-4 Northern No. 4450 and her splendid orange, red, and black consist up the 2.2 percent grade to the Cuseta Pass summit. The next day I was to discover that my mad dash to trackside had carried me through a virulent patch of poison oak. But considering the resulting negative—one of my favorites of SP in steam—it was not too high a price to pay.

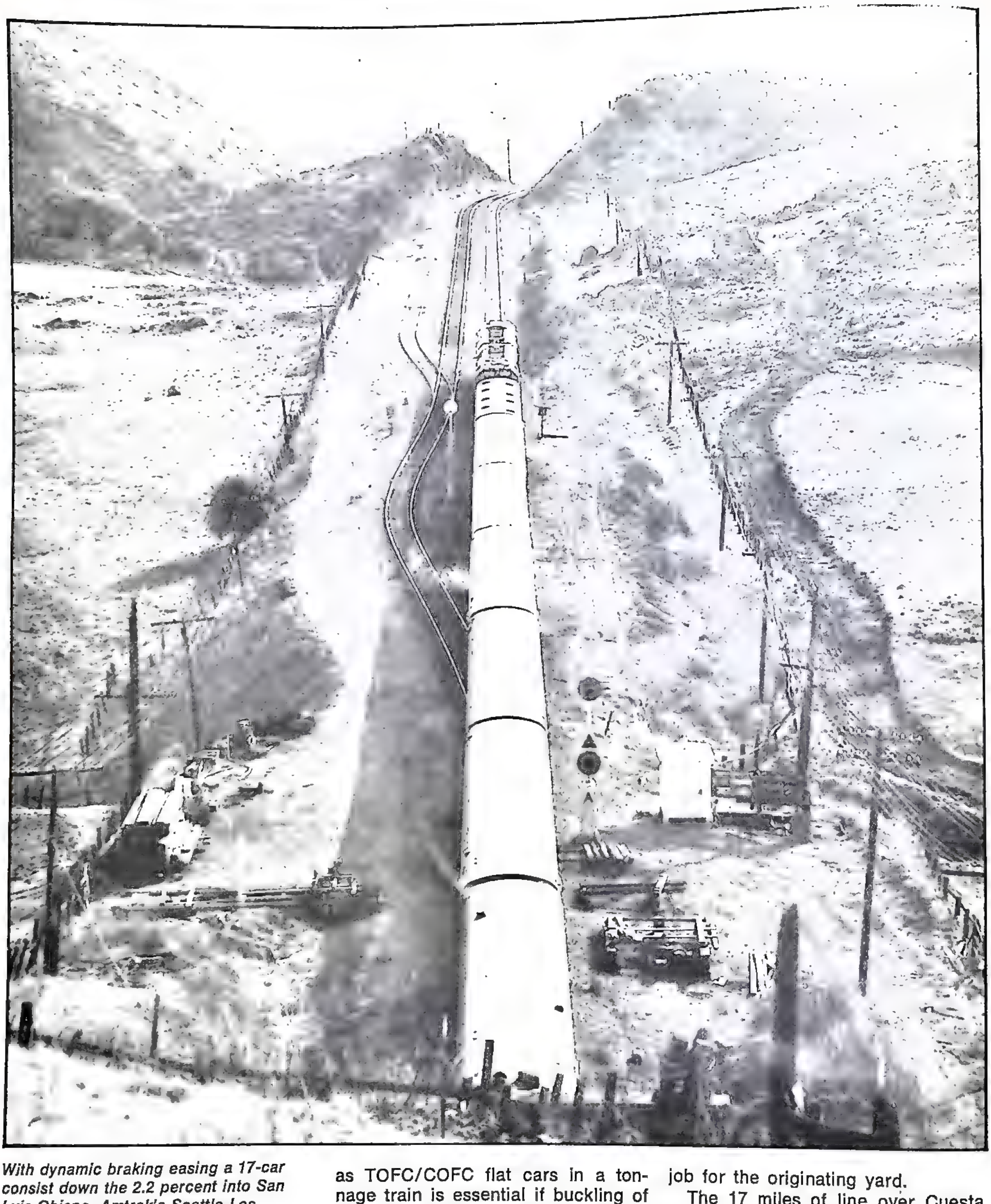
On an August afternoon almost 25 years later I returned to the same spot to record the changes of a quarter century. Both much and little had changed. The big oak tree behind the signal mast was gone, but the countryside was otherwise almost untouched by time. The muffled SDP40Fs of Amtrak's COAST STARLIGHT—the successor train to SP's COAST DAYLIGHT—were decidedly less exciting than the 2-10-2 and 4-8-4, but the consist that followed them was no less satisfying a means of overland transportation. The poison oak was still there, but this time I had the good sense to go around it.

Pulled by SDP40F units 557 and 552, westbound Amtrak No. 14, the COAST STARLIGHT, heads up the lower side of the curve past the California state correctional facility.

Typically, SP moves three or four regular through symbol freights over the Coast Line in each direction daily, usually originating or terminating at such major yards as Los Angeles and West Colton to the south, or Watsonville Junction, San Jose, or Oakland to the north. Depending on the season and traffic requirements, San Luis Obispo also may originate or terminate several Coast Line "peddlers," sugar beet extras, or the like, and Cuesta Pass traffic can get considerably heavier than that norm of three or four trains each way daily.

Eastbound or westbound (regardless of geographical direction, on SP west is toward San Francisco, east away) trains are limited to 7000 tons over Cuesta Pass, and a full tonnage train will take eight units—four on the head end and four mid-train helpers—to get it over the hill. For westbound traffic helpers are cut into the train at San Luis Obispo; SP's rule-of-thumb for mid-train helpers is that they should be cut into a train at a point where they'll push a third, and pull two-thirds, of their tonnage rating. Once over the long (12.5-mile) westbound hill the helpers normally come off a train at Santa Margarita, where—depending on traffic—they'll either lay over to help traffic over the much shorter (4-mile) eastbound grade, or return light.

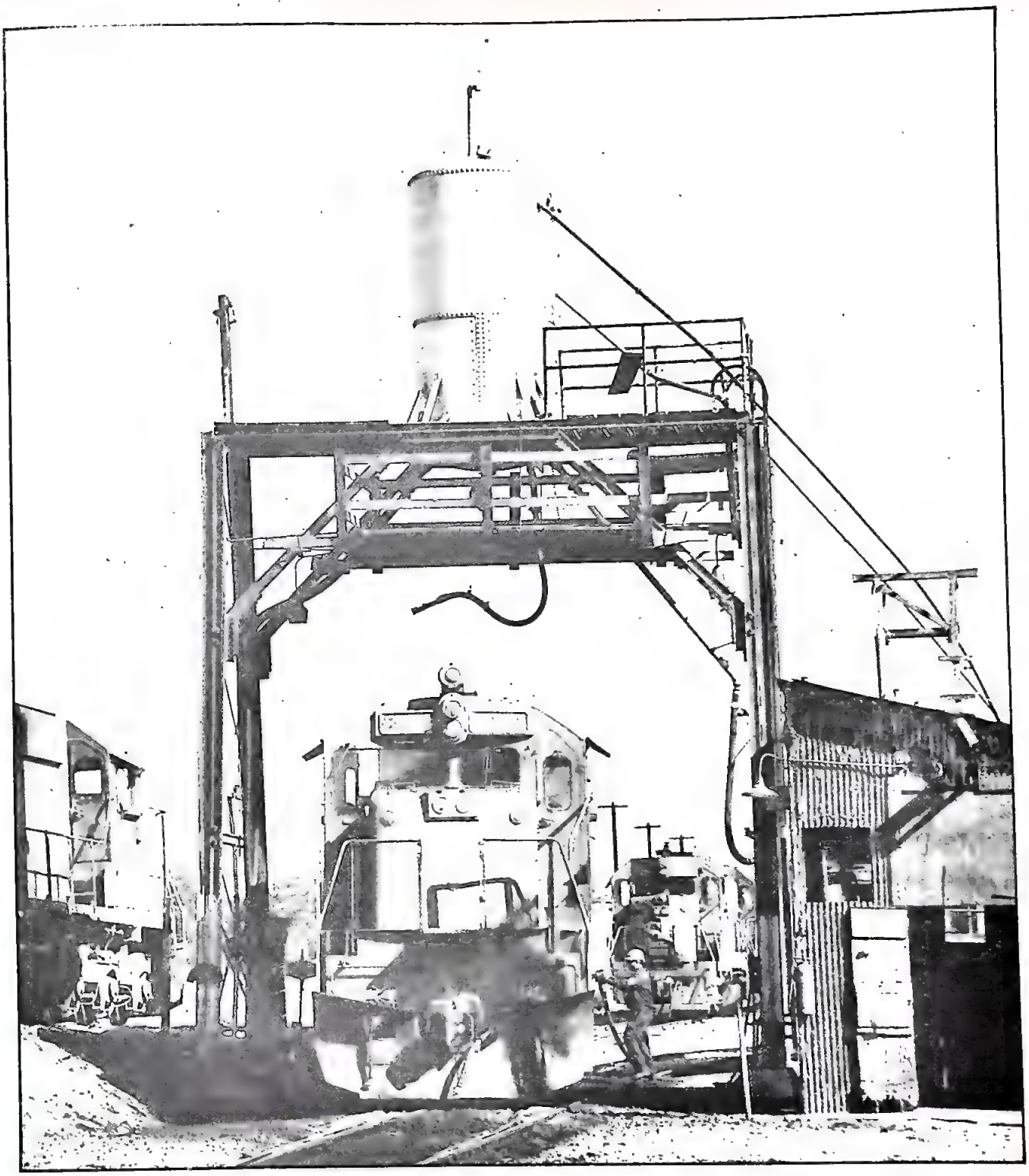
In addition to 2.2 percent grades, Cuesta Pass has some tight curvature—between San Luis Obispo and Santa Margarita there are more than 50 curves, many of them as sharp as 10 degrees of curvature—and SP has learned the hard way that proper placement of such long equipment



With dynamic braking easing a 17-car consist down the 2.2 percent into San Luis Obispo, Amtrak's Seattle-Los Angeles COAST STARLIGHT descends the south slope of Cuesta Pass in November 1975 behind SDP40F units 553 and 570. The train is seen just above Tunnel 11, and emerging from the tunnel at the upper end of Chorro siding.

as TOFC/COFC flat cars in a tonnage train is essential if buckling of a train—and derailments—are to be avoided. These long cars must be placed at least ten cars behind road engines, and equally far ahead of mid-train helpers. Making sure they get placed properly in a train is a job for the originating yard.

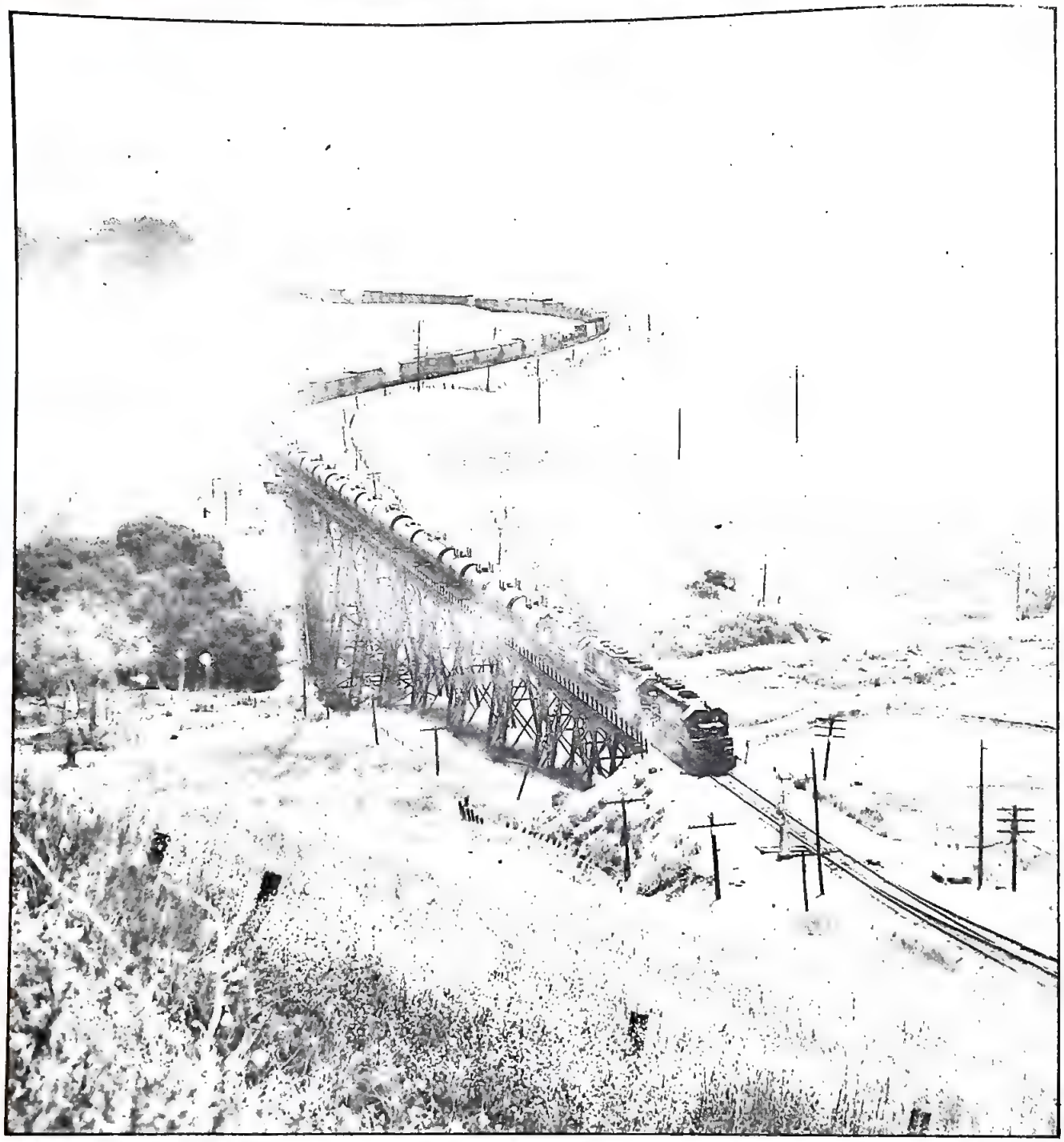
The 17 miles of line over Cuesta Pass from Santa Margarita to San Luis Obispo—as well as five intermediate passing sidings—are under the CTC control of SP's dispatcher at far away Roseville, near Sacramento, but San Luis Obispo, at the south



(or eastbound) end of the Pass, is otherwise the hub of SP operations over the Coast Line's big hill. The San Luis Obispo operator—a three-shifts-daily, seven-days-a-week job—handles both eastbound and westbound train orders for the Los Angeles District and Roseville dispatchers, and maintains radio contact with trains on the hill.

San Luis is also a crew change point for train crews that work eastbound to Los Angeles and westbound to Watsonville Junction, and there's an around-the-clock crew dispatcher to keep them sorted out. San

San Luis Obispo's little engine house and its one-man crew service diesel power for both Cuesta Pass helper service and trains originating or terminating at San Luis Obispo.



A westbound 116-car freight comes booming up from San Luis Obispo in the charge of a four-unit mix of SD45, SD35, and U36C units, and—86 cars back—a mid-train helper made up of four SD35, SD45, and SD45T-2 units. With all eight units straining hard to maintain their speed on the 2.2 percent, the train heads across the Steiner Creek bridge.

Luis Obispo's engine house and its one man work force take care of both the helpers for the hill and power required for trains originating and terminating at San Luis Obispo.

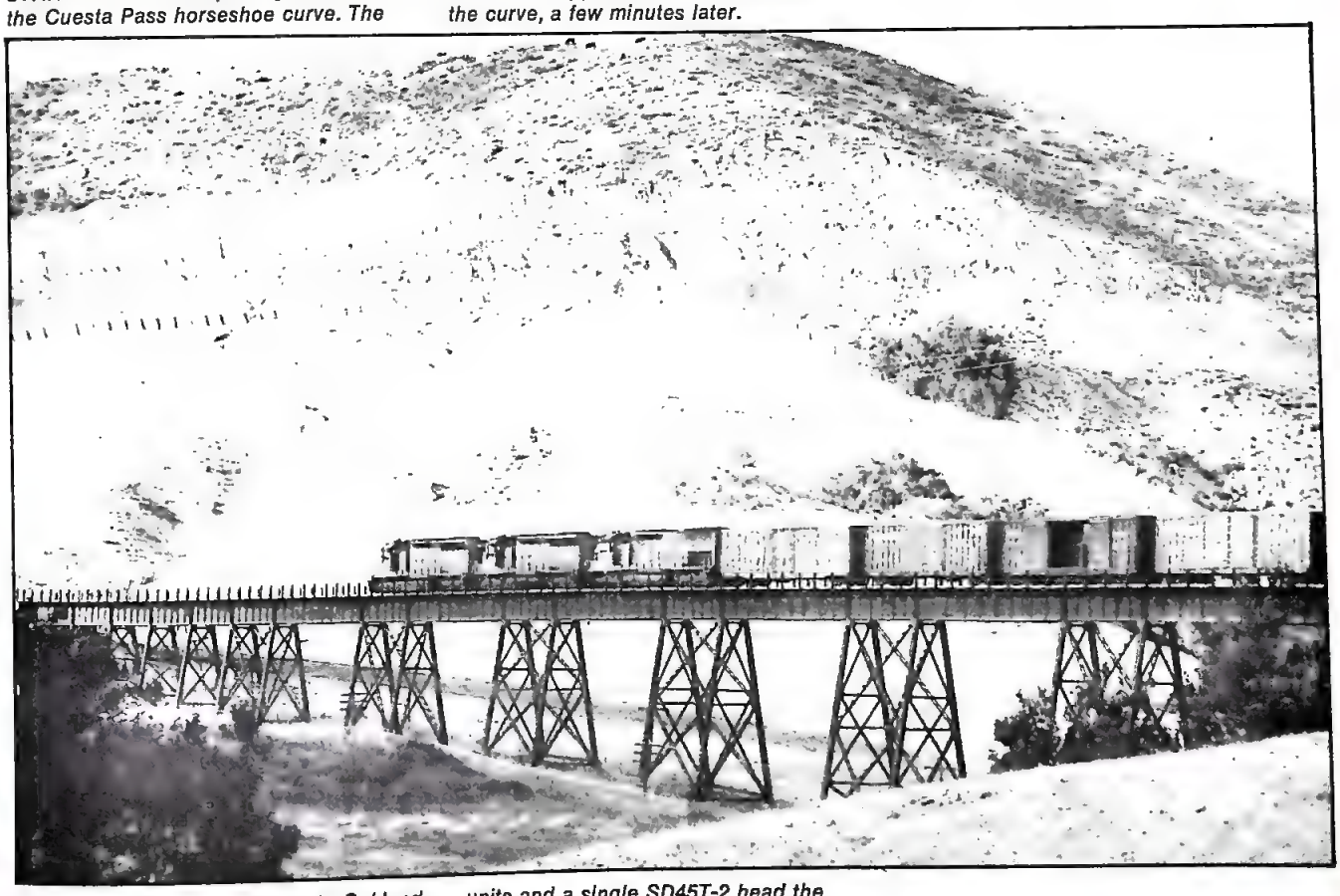
The ranking SP supervisor at San Luis Obispo when last we visited was Los Angeles District Assistant Trainmaster M. L. "Bud" Park, now retired. Technically, Park's territory ends at San Luis Obispo's west switch, but when things go wrong on the hill, which they frequently do, it usually falls to "Bud" Park to clear them up.

"If someone says he's in trouble on the hill," says Park, "we know just where he is. And," he continues, "it's usually a miserable place to get to for emergencies."

Accessibility to most parts of the long grade is poor, and in many areas there are no roads available at all. Sometimes just a pulled drawbar at one of these hard-to-get-to locations can tie up the line for hours. When something like this happens Park may have to call a helper to pull part of a train back down to San Luis Obispo, so that car men can take equipment up the track on a truck to make repairs, and then put the train back together again.

"It's up to me to figure out a way to make the hill work," says Park, "and we usually do."

From a rocky outcropping above Chorro siding, Amtrak's westbound COAST STARLIGHT ends its passage around the Cuesta Pass horseshoe curve. The 16-car train crosses the Steiner Creek trestle at the beginning of the curve, and then reappears at Chorro, above the curve, a few minutes later.



Westbound from West Colton to Oakland, SP's 108-car symbol freight WCOAF grinds up the 2.2 percent Cuesta Pass grade in November 1975. Two SD45 units and a single SD45T-2 head the train across the Steiner Creek bridge towards the horseshoe curve.

WHAT'S HAPPENING

RAIL CLASSICS will pay $5.00 for each photo used in What's Happening. News photos of all types are welcome, both black & white prints and color transparencies. A self-addressed, stamped envelope is required for return of unused material. Send to WHAT'S HAPPENING, Rail Classics, 7950 Deering Ave., Canoga Park, CA 91304.

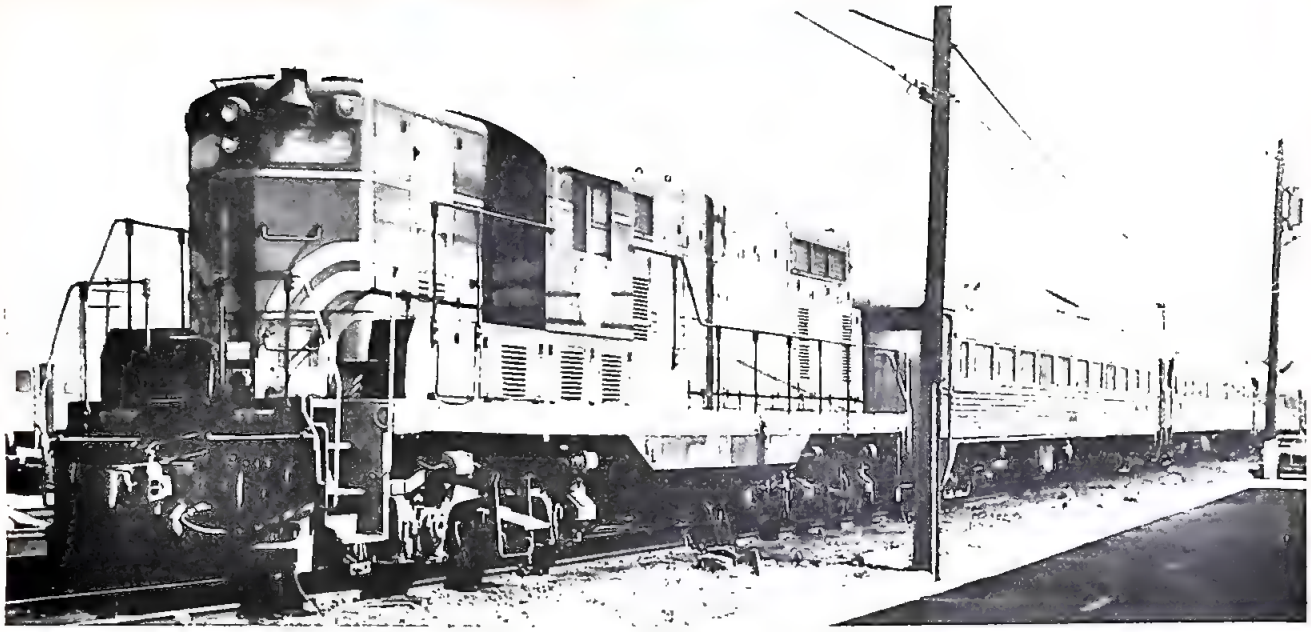
The new Erie Western Railroad recently took delivery of four RS-3s, all formerly owned by the Chicago & North Western. The units were painted at the North-western's Coach Shops in Chicago. The units, numbered 1600-1603, will join the ex-Long Island C420s, handling freight for the railroad. Joe DeMike

The newly formed Lamoille Valley Railroad in Vermont uses an ex-Delaware & Hudson RS-3 named the "Morrisville." The picturesque shortline crosses a number of rivers, and even encounters a covered bridge just outside of St. Johnsbury. Ron Johnson

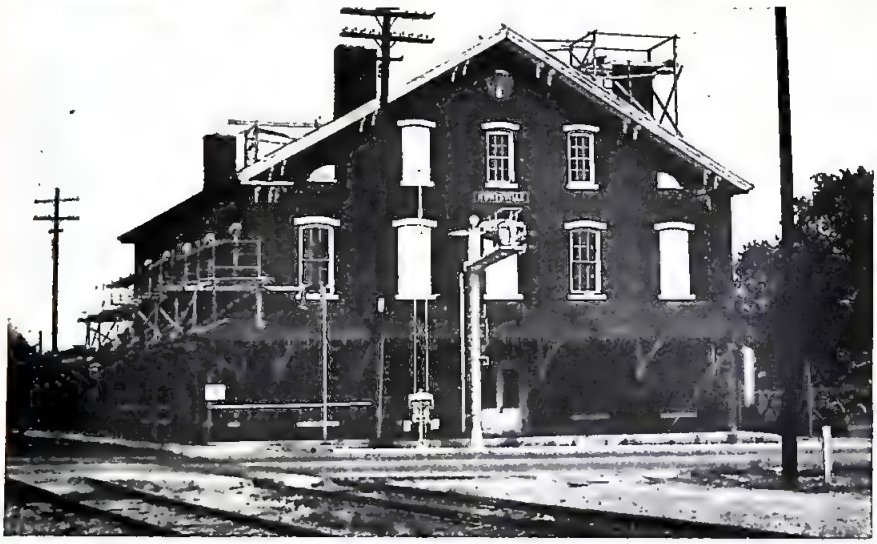
The last remaining Norfolk & Western F-7A, formerly Wabash Railroad #3725, is seen at Canadian National's Fort Erie engine terminal in June of 1978. Sister units 3660 and 3671 have been scrapped. How long #3725 wil last is anyone's guess. Helmet Ostermann

The transportation scene in Detroit area gets some new color as SEMTA (Southeastern Michigan Transportation Authority), operating via the Grand Trunk Western Railroad is using locomotives such as No. 904, a GP18, formerly owned by GTW. The passenger cars for the most part came from the Union Pacific. Jim Wozniczka

Amtrak is putting a group of rebuilt GP-7s to work on their Northeast Corridor. The locomotives have been completely rebuilt by the Rock Island in their Silvis Shops, and are painted a bright orange, with black lettering. Unit is seen in May, 1978 in Baltimore's Orangeville Yard. Mike Wilson

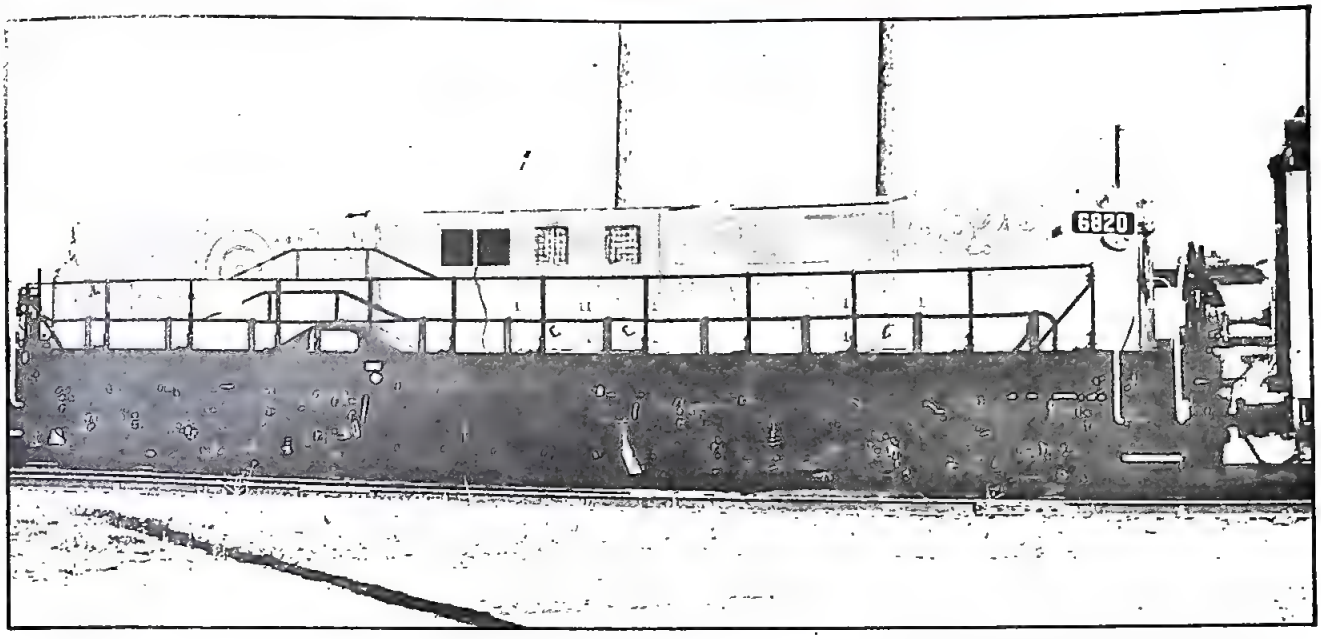


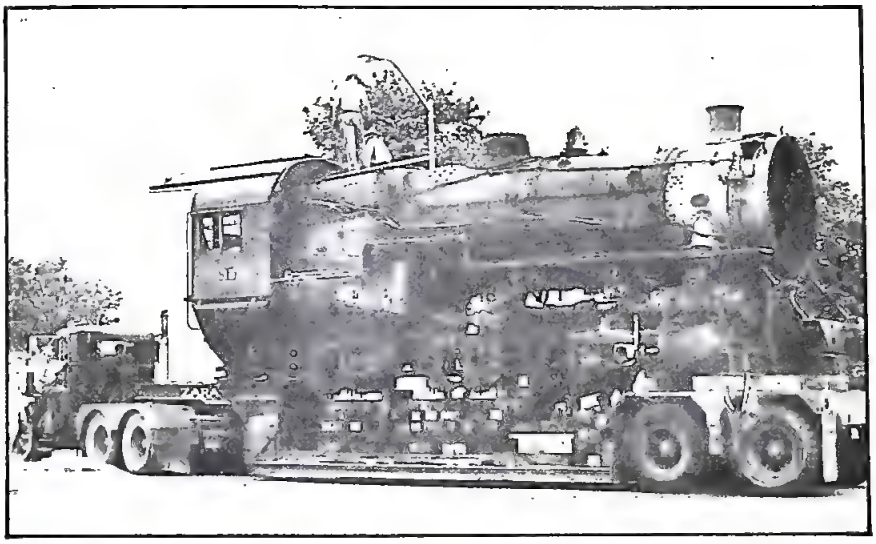
Another paint scheme bites the dust as Boston & Maine's maroon and gold GP-7 #1565 lost its old colors, and emerged from the shops in bright blue. Only two B&M units, both in freight service, still retain original colors.
Peter I. Roehm



The vintage Southern Rwy station at Huntsville, Alabama is shown in May being restored to its original condition. Both the city and local NRHS Chapter are coordinating their efforts to renovate the historical depot and train shed.
Ralcon Wagner

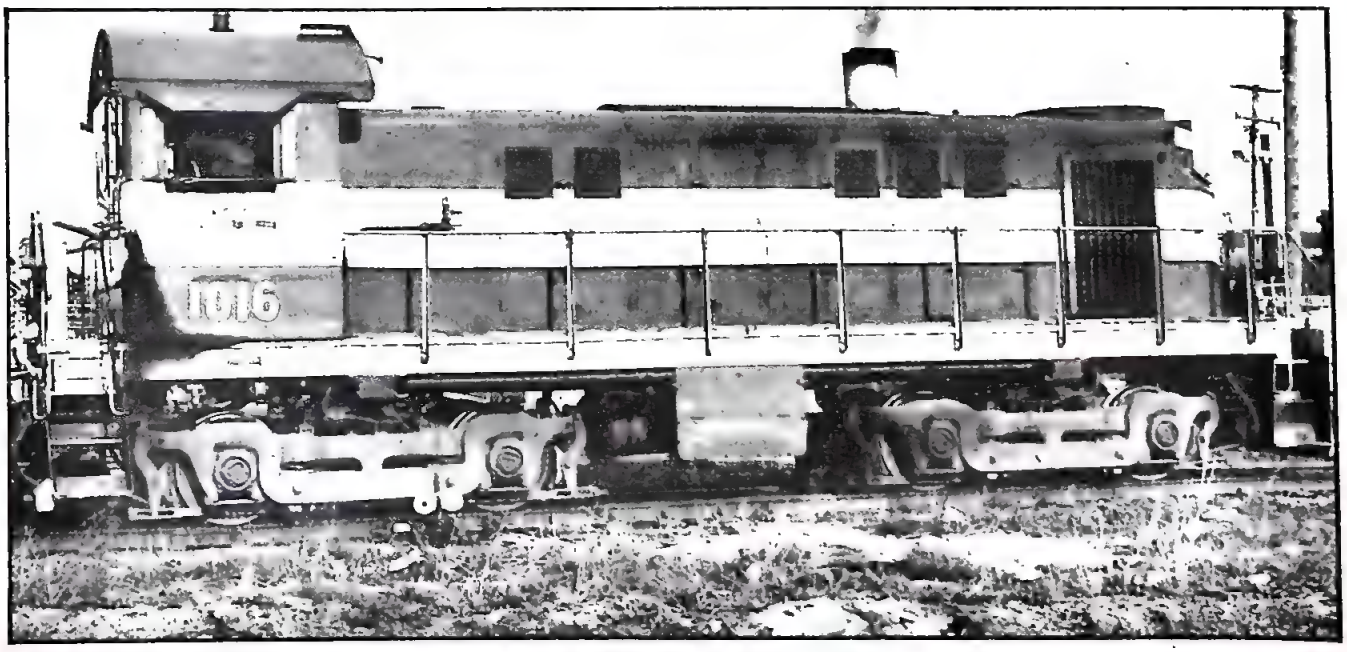
Conrail still looks like an operating museum at times. A case in point is this FL-9, still painted in its original New Haven red, black and white livery, with a small PC emblem on the side. How much can a pot of paint cost?
Jerome Rosenfeld





Conrail has taken delivery of its first slug, Class MT6. They are being rebuilt in General Electric's Cleveland plant from retired PRR Alco RSD12s. A total of thirty of the slugs are planned and will be used in hump service and possibly in ore duty. Warren G. Opalk

Ex-Long Island passenger locomotive #35, a Class G5s 4-6-0, which has been on display in Eisenhower Park in East Meadow, New York, has been moved for restoration. The tender was moved in January and the locomotive in June, to Mitchell Field, Long Island, where she will be repaired enough to permit another journey to Ringoes, New Jersey, and the Black River & Western RR, where final restoration will be completed. John J. Scala



Last of its kind. Still working daily on the Newburgh & South Shore Railroad, down in Cleveland flats, is this Alco T-6, the latest diesel locomotive to roll off the line at Alco's Schenectady, New York plant. Frank S. Novak

Taking over for the Royal Hudson for a few days was 2-8-0 No. 3716, seen here working between North Vancouver and Squamish. Owned by the Provincial Museum she is presently at use with the Museum traveling exhibit.
Dave Wilkie

One of Conrail's newest locomotives, a General Electric B23-8, #1911, along with a pair of GPs lead symbol PINE9 eastbound around Horseshoe Curve in late May, 1978. Greg Roach

What at first glance looks like just another of Amtrak's E-8s, is in reality the experimental fuel tender unit. The electrics and prime mover have been removed and replaced by large fuel tanks. They are being tested on certain runs as a way to eliminate intermediate fuel stops. John C. Benson

ROLL YOUR OWN

Individuals can buy new freight cars and make money running them on the U.S. railroads.

BY ED STAUSS

If you met a gorgeous redhead and she tried to talk you into owning a railroad car, would you—

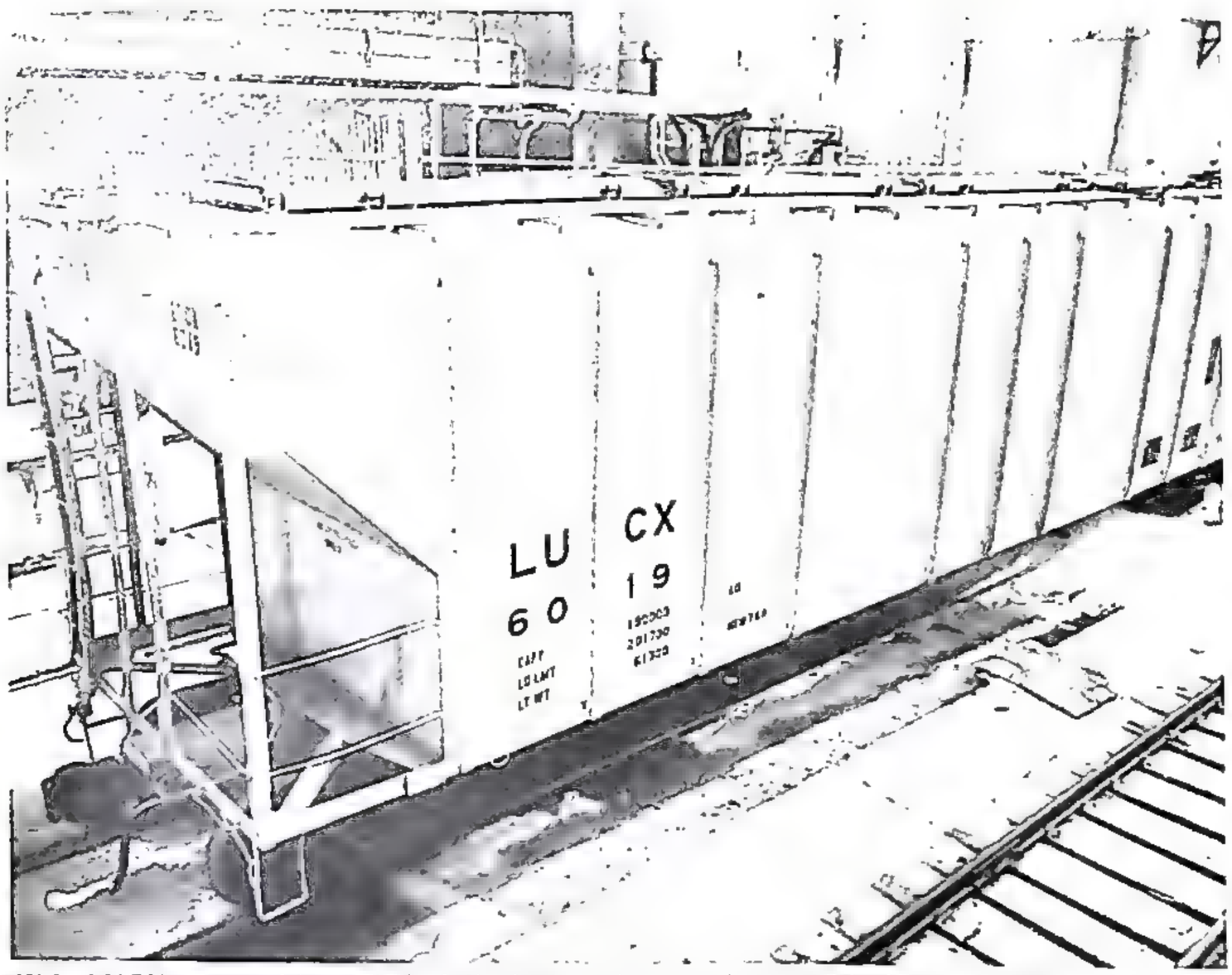
a. Buy a car and let her manage it.
b. Try to change the subject.
c. Call the police.
d. None of the above.

It turns out the recommended answer is "a" because this lady knows exactly what she's talking about and her management plan may benefit you financially. Being the first on your block to own your own railroad car (full size) not only gives you a conversation topic that's a lot more novel than most TV sports post-mortems, but also makes good business sense.

Here's the plan. You buy a car, either a tank car or a hopper, and she'll register it in your name with the Interstate Commerce Commission. The car is yours to push off a cliff, sink in a lake, or whatever. What you'll probably do is sign a management contract, let her paint her reporting marks, LUCX, on the car and get it into revenue service.

The improbable redhead is Lucille J. Boston, attorney and president of LUCX, Inc. The whole thing started in 1971 when her brother, a doctor, asked if she could think of a good investment which would also provide a tax shelter. They tried it and it worked so well she began telling her legal clients about the cars. Now she's organized well enough to let any private car owner join the LUCX fleet which, by December 31, 1977, had grown to 150 cars. During 1978 she expects a big expansion which will add 200 covered hoppers and 128 tank cars.

To learn about Lucy and LUCX, I visited her office in the Marina City Club in Marina del Rey, California. The luxurious suite was full of pictures of trains, books of trains, and models of trains.



This LUCX covered hopper is full of phosphate to be used in Lever Brother's soap.

Roofing asphalt arrived at the Flintkote Company in this LUCX tank car.

"LUCX," she said, pronouncing it like the soap named Lux, "is the cleanest four-letter word in railroading."

Getting right to practical matters, I asked her how much my railroad car would cost. She answered, "New cars are running about $36,000. Cars have tended to increase in value each year, mainly due to an increase in steel prices. The resale value of used cars is extremely good."

"Let's assume I've bought a car, how do I get it into service?" I asked.

"Your car would most likely be leased to a shipper like EXXON or Procter and Gamble, although some of our cars will be leased to the Chesapeake and Ohio beginning in June, 1978. Your income checks will be based on mileage allowances from the railroads over which your car has been operating. If there hasn't been enough usage in any month, the company that leases your car will pay the difference so that you'll always get your full monthly payment."

"How much is the payment?"

"They've been running about $385 gross per month on a new tanker or hopper."

If it sounds like a lot of bookkeeping, it isn't. As owner, all you have to do is cash those checks each month. Management is accomplished by LUCX for a fee of 25% of the adjusted gross operating income.

Then it occurred to me that I'd never seen a LUCX car so I asked her where they might be seen in the Los Angeles area. The answer surprised me.

"We try to keep our cars out of California. California has an unfair ad valorem tax computation which we'd rather avoid. The tax is based on the value of the car times the number of days it's in the state. Other states which have high taxes are Ohio, Illinois, Utah, North Dakota and Michigan. Some states, such as Oklahoma and New Mexico base their use tax on earnings which works out much better for us. But our favorites are Texas, New York and Pennsylvania which charge no use taxes. We try to get your car leased to a shipper who operates primarily within the lower tax states. Sometimes, however, LUCX cars do come into California and I have seen them while I'm traveling to Palm Springs."

She added, "Some of the owners who live here in Los Angeles have visited their cars in other parts of the U.S. It makes a nice vacation trip. You can always find out exactly where your car is by calling Floyd Chartrand, our Traffic Manager."

I suppose some owners have never seen their cars, but I'm sure I'd like to see mine, if I had one. Of course the reason for buying one is it's a good solid business deal. You can expect an annual profit of eight to ten percent, the car can appreciate in value, and there is major tax relief and tax shelter. The cars can be a personally-controlled retirement program or an educational fund for children or grandchildren.

If you want the full story on the plan, write to LUCX, Inc., 4314 Marina City Drive, Suite 130, Marina del Rey, CA 90291.

LUCX suggests a tax write-off schedule of twelve years although the physical life of a car is much more. The American Association of Railroads (AAR) has ruled that a car can be used in interchange service until it is 40 years old and LUCX anticipates profitable employment for most of a car's actual life. At the very end, it can be scrapped for about ten percent of the current production cost.

Owning your own railroad car gives you an investment that's also a good status symbol and conversation piece. If you want to paint your name on the car, according to LUCX, that's okay too!

EAST GERMANY'S DISTINCTIVE STEAMERS

Join with the author on a somewhat harrowing journey to view Communist railroading.

BY RON ZIEL

A comparison of the mainline steam power of West Germany's railways *(Deutsche Bundesbahn)* and those of East Germany *(Deutsche Reichsbahn)* is interesting, in that it shows how two diverse forms of government and administration within one formerly united country will go their separate ways, both in the handling of common locomotives, which were universal before the political division, and the later development of new classes. In 1970, I extensively photographed the *Bundesbahn* and in 1972, I spent just two days in the West, but nearly a week on the *Reichsbahn.* In 1974, I spent almost a week in each of the two Germanys. While it would be fascinating to compare postwar motive power developments in both countries, particularly with photographs, this article will concentrate on the DR, while only mentioning comparable DB developments, when applicable.

At first thought, photographing steam engines in the *Deutsche Demokratische Republik* strikes one as being a dangerous venture and, prior to recognition of the DDR regime by the United States a few years ago, it was fraught with uncertainty. The DDR is an extremely dour and repressive regime, as is well known to the world because of the Berlin Wall, the border minefields and the Vopos *(Volkspolezei,* or People's Police). Railway photography was officially *verboten,* as in most communist countries.

In actual practice, I had some harrowing experiences, but very often local railway officials, partly out of disgust with the regime and contempt for the Russians and partly from wanting to be friendly to foreigners and understanding of my appreciation for their locomotives, actually allowed me on the property to take photographs, even to the extent of intervening when nosy Vopos appeared. Before going into the matter of the steam locomotives themselves, a few paragraphs relating the experiences while sneaking around a hostile land, breaking the law, are in order.

The best way to begin a "tour" of the DDR is to rent a car in West Berlin and proceed to Checkpoint Charlie and through the Wall. On the American side, there is a booth in the middle of the road, manned by a pair of Military Policeman. At the border of the DDR, one hundred feet beyond them is a heavy steel gate, concrete obstacles that vehicles have to zig-zag through at 10 mph, two walls, between which are obstacles and barbed wire, as well as the customs offices and a parking lot. Nearby is a high sentry tower where Vopos, armed with automatic weap-

An uncommon four-axled steamer pulls a freight through Rogatz during the fall of 1974. Photos by the author

This 2-10-2T pulling a local passenger train is actually narrow gauge, operating near Radebeul Ost.

ons, stand guard above a second gate. After obtaining a flyer from the American side, warning that since the DDR was not recognized by the U.S.A., Americans should avoid the DDR, or if they must enter, do so exercising caution at their own risk, I swallowed hard, still determined to photograph the *Reichsbahn* steamers.

Once through this "Welcome to the workers' paradise" scene, I decided to play it safe and try to obtain a photo permit. The DR headquarters was a short distance away, along the Wall, so I drove there first. After waiting in the reception area of the old prewar building that had somehow survived the bombing of everything within 1000 yards, I was introduced to an official who said I would have to write for a permit, to a man whose office was on the second floor. No, I couldn't just go up and ask. No, I couldn't write a note right there and deliver it to him. It had to come by mail, he had to consider it and would reply in a week or so. (Of course I had written to the DR months before I left the U.S.A., but had never received a reply). Having dealt all too often before with communist bureaucracies, I bid the DR official *auf wiedersehen* and decided to go it without a permit. British railway enthusiasts had succeeded in recent years and I had gotten some good tips from them.

October 5th, 1972 was my first full day of photography in the DDR and I covered the mainline from Berlin to Dresden, a famed stomping grounds for East Germany's most celebrated locomotives, the sleek semi-streamlined 01.5 class of Pacifics, which were rebuilt from older class 01 4-6-2s, some of which were still operating on the DB. Looking for a secluded spot, away from the Russian Military Police I had seen along the road, I found a grove of trees between the road and the railroad, which was on a high embankment, 100 yards away. I hid the yellow (it had to be *yellow*) Volkswagen in the bushes and climbed the embankment, 2¼" x 2¼" twin-lens Mamiya and tripod-mounted 4" x 5" in hand, for several hours of 52-class 2-10-0s, 35-class 2-6-2s and 01 and 01.5 Pacifics.

Set up on the far side of the embankment, I got several good shots the first hour, with me and the 4 x 5 quite visible from the road, when I learned why the Soviet M.P.'s had been out in force. Suddenly huge Russian troop carriers, open on top and carrying about twenty armed soldiers each, began rumbling down

With Russian soldiers on the road behind him, the author captures this 2-6-2 on film.

the highway! I simply lowered the tripod and got slightly lower-angle photos; even when one of the blasted troop carriers broke down right in front of me and Russians wandered around the field, practically up to the embankment, they never saw me.

After photographing the famous 2-10-2Ts of the narrow-gauge lines around Dresden, I continued across the southern DDR, towards Leipzig, jumping 2-6-2s, 4-6-2s, 2-8-2s, 2-8-2Ts and the several classes of ubiquitous 2-10-0s along the way. Generally, I found it best to keep on the move, getting a few shots in one place, then taking off, depending on the law of averages to avoid being spotted by the Vopos. But on October 8th, it all caught up with me. I was north of Magdeburg, in the station area at Haldensleben, when a 50-class Decapod started rolling out of the yard. I stopped at the lowered gates, but over the crossing, and the watchman was already scowling at me, so I opened the car door and left the 4 x 5 on the driver's seat. As the train blocked the view of the watchman, I got a good rear ¾ shot

83 2207-3

Delicate spoked drivers add to the appeal of the Class 03 4-6-2 Pacifics.

Another series of 2-10-0s is the 50 Class, and like all East German steamers is coal fired.

of No. 50 3631 working a freight. I then turned the car and left, long before the train passed, grabbed a photo of a 52 on an ore train and high-tailed to Magdeburg and up along the mainline which goes to Rostock, where I stopped at a crossing in Tangerhutte, for the gates were down and a semaphore was up.

About a mile down the track, I could see a cloud of dust and black smoke. I couldn't believe the speed of the approaching train and quickly set the 4 x 5 at 1/1000 of a second. Standing 10 feet from the track, I clicked the shutter when the semi-streamlined Pacific, No. 01 524, was almost on top of me; then I turned and doubled over as the juggernaut shot past, wrenching my jacket over my head. Water vapor, dust and smoke enveloped me, the ground trembled and it was gone. This was the fastest steam train I had ever seen; well over 80 mph!

The afternoon sun was fine, so I set up in a field just outside of Tangerhutte and a few moments later, a 41-class 2-8-2 and two carloads of Vopos were descending on me at once. I clicked the shutter just before the Vopo ran in front of the camera, yelling *"kein foto!"* With one Vopo car in front of my yellow VW and the other behind, I was escorted to the police station, for questioning. The police station was typical of others in which I'd been busted in communist countries such as Hungary, Czechoslovakia and Yugoslavia; concrete walls, spartan furnishings, bare light bulb hanging in the midst of each room.

The small four-wheeled passenger coaches provide easy work for the 2-8-4T steamers of the 65 class.

First thing was a thorough inspection of my passport by all three cops in the little village, then telephone calls to various police and railway officials—the usual bit. Having a working knowledge of German, I was able to understand much of what was being said and I detected mainly confusion among the Vopos as to what I had been doing and why. I sensed the right moment to seize the initiative, as soon as they came to the inevitable dreaded idea; to confiscate all of my film. I just shrugged, went out to the car with two cops and brought in my film holders and some roll film, as well as copies of two of my railway books and photos I had shot in other communist countries.

In my best German, I told them that I was an author of books on steam locomotives and showed them the books. Before they could recover from that surprise, I whipped out a sheaf of 8 x 10 prints of pictures I had shot in the USSR and other "socialist camp" nations, while telling them a whopper: that these countries had all welcomed me warmly and had issued photo permits. Of course, none had. Finally they returned my film, escorted me to the car, bade me *auf wiedersehen* and made me promise not to shoot any more pictures in Tangerhutte. I returned to Berlin.

My last trip to the DDR, exactly two years later, was more successful. By that time, restrictions on railway photography had loosened up considerably, due to the fact that for all its shortcomings, the bureaucracy of the DDR apparently realized that there was a genuine *Eisenbahnfreunde* (railfan) interest in their *Dampfloks*. The few times I was accosted by the Vopos, I happened to have permission from the local DR supervisors to take photos, so they left me alone. Plus, I had an ample supply of prints from the first trip and the finished TWILIGHT OF WORLD STEAM book with the DDR chapter to show them, which actu-

A rebuilt 01.5 4-6-2 roars through Tangerhutte, East Germany at 90 mph!

ally made the dour Vopos somewhat friendly.

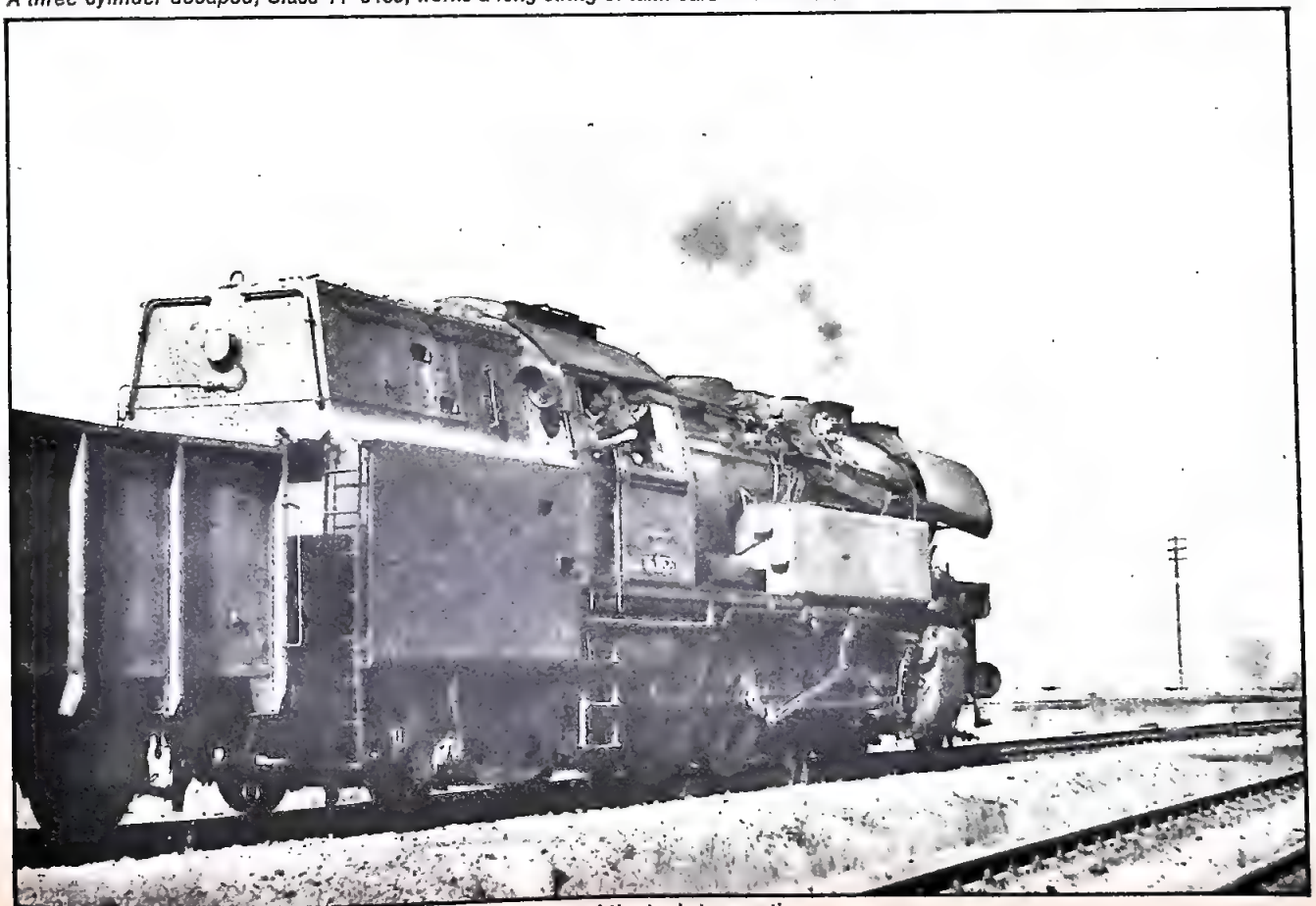
At one station, which for obvious reasons should remain anonymous, the superintendent told me to totally ignore the Soviet officers gazing intently at my every move, since they had absolutely no authority! By my usual hit-and-run photo tactics and by seeking out the surprisingly many relatively desolate locations along the DR, I got a goodly amount of action shots on the 1974 trip. The DDR, like Hungary, resulted in fewer total numbers of pictures, but because of the advisability of avoiding stations and people in general, over 90% of all of the 300-plus photos I got were action shots, out in scenic countryside.

As far as postwar steam locomotive development is concerned, it is interesting to note that where the construction of new classes was undertaken and despite the open hostility between West and East Germany, comparable types in both countries often received the same class designation (2-6-2s of both systems were designated 23, 2-8-4Ts were 65). There the similarity ended, for the DR types were invariably larger and handsomer.

A very outstanding characteristic that immediately sets DR modern and rebuilt power in its own class, is the application of the Heinl Feedwater Heater. Set into the top of the smokebox and protruding ahead of the stack, it has a flat top. As can be seen in the accompanying photos, by its position and steam exhaust, the Heinl frequently hides the stack in front and side views.

Although the decision was made to cease all steam production after just 322 new locomotives were built in the postwar era, that did not end the development of DR steam power. When the last new steamer rolled out of the factory in 1960, the Stendal Works continued a massive rebuilding of older classes. In some cases, this meant virtually entirely new locomotives, with new boilers and fireboxes, enlarged cylinders and rebuilt frames. This program continued into the late 1960s and although both the DB and DR, in the early '70s, were planning on total elimination of steam by 1977, it is fortunate that only the DB met the deadline; the DR still operating hun-

A three-cylinder decapod, Class 44 0453, works a long string of tank cars near Welle.



A rear view of a Class 65 shows the strange bunker area of the tank locomotives.

Two coaches and a baggage van make up the local train at Penig in October of 1972.

dreds of postwar and rebuilt engines at the end of the year. Although countries such as South Africa are rebuilding 4-8-4s right now, no other country is known to have so extensively upgraded its steam power in later years, as has East Germany.

Although most *Deutsche Reichsbahn* steam locomotives are impressive, a special mention should be reserved for the 01.5 Pacifics which, along with the Soviet 4-8-4s, Czech 4-8-2s and Hungarian 4-8-0s, are generally acknowledged to be the handsomest locomotives in Europe. There seem to be less than 50 of these rebuilds of older 01 4-6-2s, the highest numbered one I saw being 01.535. About a dozen of the sleek Pacifics have Boxpok driving wheels, the rest retaining the original spoked drivers. All have Heinl Feedwater Heaters and a straight skyline casing, plus small smoke deflectors. The ones with Boxpak wheels also have a narrow running-board skirt, but unfortunately, I never saw any of them. I managed to photograph about a dozen 01.5s in action, beginning at the Grunewald in West Berlin, where they handled expresses from West Germany into the divided city, in December, 1970.

There is one unique attribute I can give to the splendid 01.5s of the DR, that I can say for no other class of locomotive I have studied around the world. I have never—seen one doing less than 50 mph! Never have I seen one standing in a station, or accelerating through a yard, or crawling up a grade. All twenty or so that I have seen, over half of which I photographed, were blasting expresses at 50 to over 80 mph across the plains of East Germany, over track whose quality matched that of the magnificent semi-streamlined Pacifics it carried!

One of the rebuilt World War II locomotives is 2-10-0 #52 8174.

CLEVELAND: Improbable Urban Transit

BY VAN WILKINS

Would you believe a transit system which:

Runs streetcars and high platform rapid transit cars on the same tracks?

Runs those streetcars in three-car trains?

Runs those rapid transit cars singly in streetcar fashion for most of the day?

Runs left hand for half its length and switches to right hand running for the remainder?

Runs on a right-of-way which lacked only tracks and catenary in the early thirties, bought cars for that right-of-way in the late thirties but never operated them, and finally ran its first train on that right-of-way in 1955?

And moves perhaps 25,000 commuters each day into the downtown area through the cavernous depths of a skyscraper designed to serve major east-west rail lines, but which it now has all to itself?

These things are true today in Cleveland, and one cannot ride without wondering how a system with such improbable characteristics came to be. This article is the result.

It all started with two brothers, Otis P. and Mantis J. Van Sweringen, who, in the course of building a trolley line to promote a real estate development, gained and lost control

Photos by the author except as noted

Ex-Minneapolis 57 leaves Shaker Square. The full length window panels in the doors are a recent innovation, unusual in a PCC.

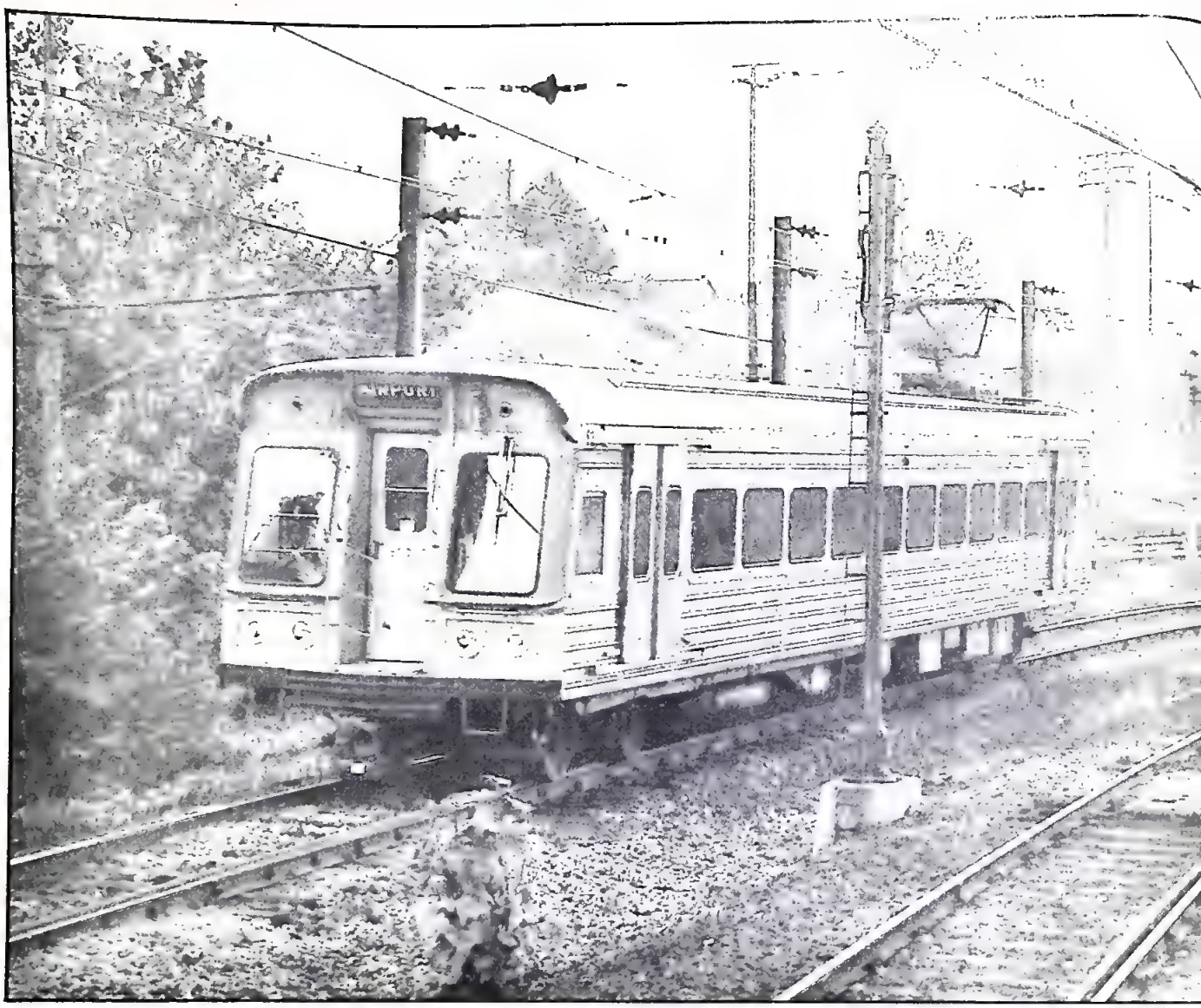
of the New York, Chicago & St. Louis (the Nickle Plate), the Chesapeake & Ohio and the Pere Marquette railroads and built what was at the time the tallest building outside of New York.

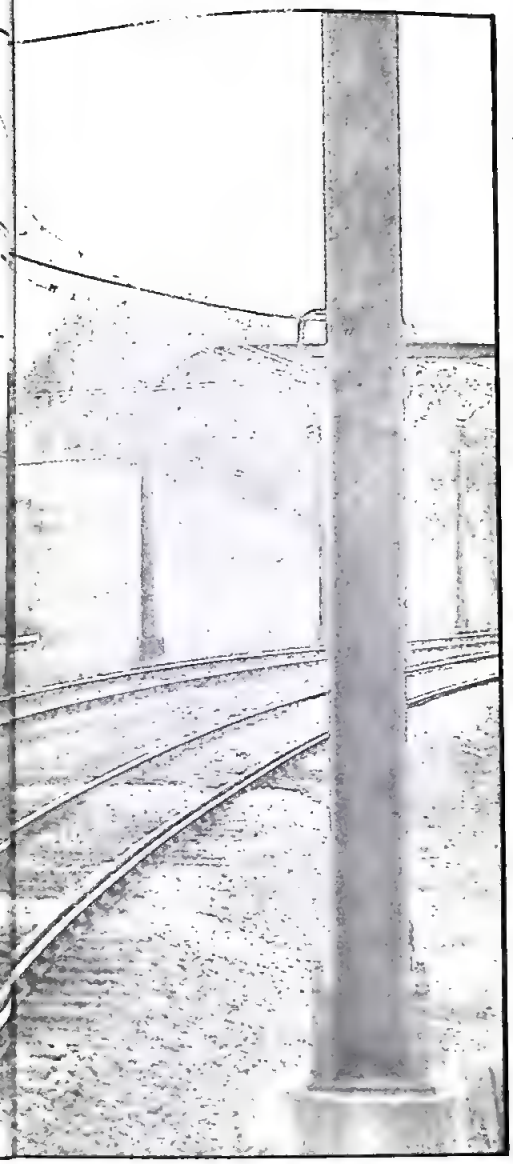
First came the Shaker Rapid. Trolley service began as support for the Van's Shaker Heights real estate development in 1913. In 1918 construction of a rapid transit line commenced, and service started in 1920 with four rented Cleveland Railway street cars.

Cleveland is the only place in the United States where rapid transit trains and PCC trolleys share the same track, as in this view at East 55th Street. John Wilkins

In Shaker Heights itself the double tracks laid on 190-foot-wide rights-of-way were the centerpieces of two major boulevards. Space for two additional tracks was provided, though never used. The promotion prospered as homes were sold to the well-to-do and the wealthy, and four- and five-car trains of leased street cars were run.

But cars reached downtown Cleveland by slow street running. The





During non-rush hours the Airporters run as single cars. Use of overhead catenary is unusual in American rapid transit practice; most such operations use a third rail.

brothers then made plans to build an off-street line into a proposed transit terminal which they wanted to erect on the Public Square. In the course of securing the needed right-of-way, they found it necessary to buy control of the Nickel Plate. One thing led to another, and the sky-scraped Cleveland Union Terminal was the result.

As the terminal and the steam road approaches were built, the Van's provided space for additional rapid transit lines to east and west Cleveland along the Nickle Plate right-of-way.

Shaker cars ran into the 708-foot-high terminal on July 20, 1930, and except for a short extension built on Shaker Boulevard in 1937 the line remains in essentially the same form today.

The vacant rights-of-way paralleling the Nickle Plate were another story. Station platforms were built, bridges constructed, poles for catenary erected, and a single line of track laid in the 1930s. In essence, all that was lacking to begin service was wire, a second track, and cars. In the late '30s the cars arrived—ten used Cincinnati Car Company curved-side light weights bought from the abandoned Kentucky Traction & Terminal system at Lexington, Kentucky. They were intended to start service on the line to the east side of Cleveland, but never ran there.

Cleveland's transit needs were studied during World War II, and a Boston-like system was proposed in which streetcars would feed onto the rapid transit right-of-way for a quick run to downtown. A trolley subway was visualized, and Shaker has PCC cars today with a door (now blocked) in the left side for subway operation. The Cleveland Railway purchased PCCs complete with multiple unit equipment except for couplers, which were to be added when operation began over the Rapid. The couplers were added, but only after the cars went to Toronto.

But after more studies the plans were scrapped, and the present high platform rapid transit line on the old right-of-way is the result. Except for Shaker Heights, trolleys disappeared from Cleveland.

Today the rapid transit runs from Windermere (where shops are located) on Cleveland's east side along the Van Sweringen's right-of-way through the Union Terminal and into the west side as far as West 98th Street. From there, over a new line paralleling the old New York Central, it runs to Hopkins Airport.

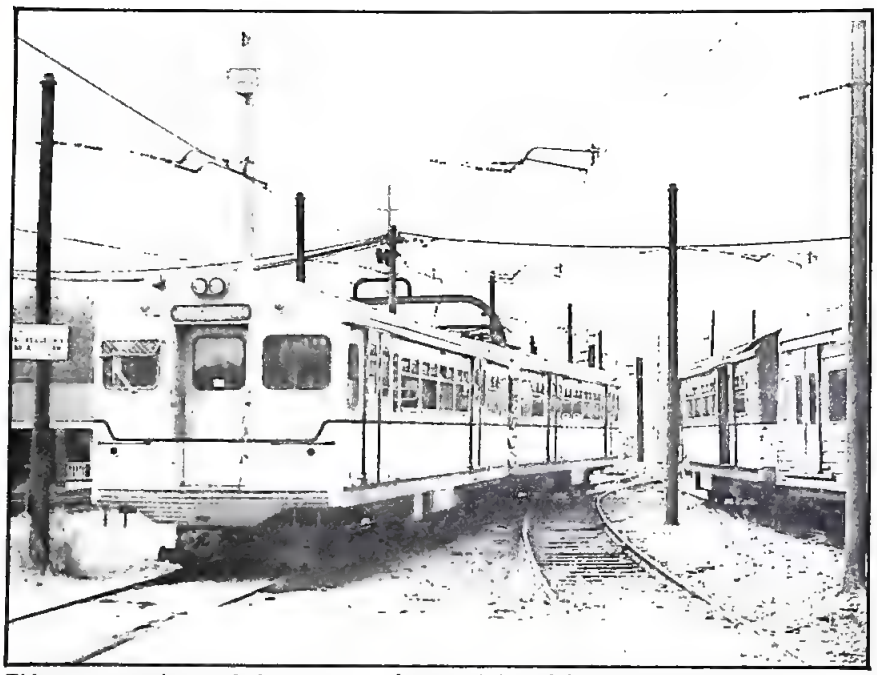
From East 55th Street to Union Terminal the trains use the Shaker right-of-way opened in 1930. This is the only stretch of line in the United States where rapid transit trains and trolleys in regular service share the same trackage. Two stations, East 55th and East 34th, have both high and low platforms. This stretch of track and the rapid all the way to Windermere use left hand running, but west of Union Terminal right hand running is used to the airport. Shaker cars diverge at East 55th and run right hand from there to Shaker Heights.

The first rapid trains ran from Union Terminal to Windermere in 1955. This was soon extended to the west side of Cleveland as far as 117th Street. The original cars are St. Louis Car Company products and resemble, but do not duplicate, 40 cars built by St. Louis for Boston's Blue line. With follow-on orders, a total of 88 were purchased for Cleveland. A further track extension toward the airport was opened in 1958, and then in 1968 the final four miles were placed in service.

New cars also appeared. Dubbed "Airporters," these stainless steel cars are 70 feet long and a very wide 10 feet 5 inches. They seat 80, are air conditioned, and provide racks for suitcases. Two orders—first of 20 and then of 10—were purchased from Pullman-Standard. They are both fast and comfortable, and the

The Van Sweringen Brothers provided very wide rights-of-way in Shaker Heights, anticipating that a second pair of tracks would be justified to handle both local and express traffic.

Number 67 loads in mid-afternoon in the bowels of Union Terminal, with passengers using both doors for entry. The Terminal is gloomy, with the gleaming paint of the well-maintained car the only relief.



This permanently coupled two-car set is part of the original equipment for the Cleveland rapid line to the east side. On the line they are capable of 55 mph.

CAR WATCHERS GUIDE TO CLEVELAND

Shaker Heights

Car #	Builder	Year	Notes
41-50	*St. Louis*	*1948*	*PCC's acquired 1959 from St. Louis Public Service.*
51-70	*St. Louis*	*1947*	*PCC's acquired 1953 from Minneapolis.*
71-95	*Pullman-Standard*	*1947*	*PCC's. Door for subway service on left side blocked.*
450-51	*St. Louis*	*1949*	*PCC's. Lettered for former owner Illinois Terminal. Leased from museums.*
12	*Kuhlman*	*1914*	*Center entrance. Ex Cleveland Ry. Preserved for historical purposes.*

High Platform Rapid

101-112	*St. Louis*	*1955*	*Single cars.*
113-118	*St. Louis*	*1958*	*Single cars.*
151-170	*Pullman-Standard*	*1968*	*Airporters*
171-180	*Pullman-Standard*	*1970*	*Airporters*
201-256	*St. Louis*	*1955*	*Coupled pairs*
257-270	*St. Louis*	*1958*	*Coupled pairs*

NOTE: Gaps in numbering exist due to scrappings.

original cars are now relegated to rush hour service.

Back to Shaker.

Through World War II the Shaker Heights line, now owned by the City of Shaker Heights, continued to operate with its large center-entrance cars from Cleveland Railway—Kuhlman products of 1914. These had been augmented by light weight interurbans from Illinois' abandoned Aurora Elgin & Fox River and the Intercity Rapid Transit between Canton and Massilon, Ohio.

In 1948 25 PCC cars arrived from Pullman-Standard, followed in 1953 by 20 used PCCs from Minneapolis and in 1959 by 10 cars from abandoned St. Louis lines. This constitutes the fleet today, supplemented by two ex-Illinois Terminal PCCs leased from museums. These have not worked out well. Perhaps years of little use at the museums took their toll.

The Minneapolis cars seem to have held up best; the St. Louies least well, In fact, according to knowledgeable local sources, the latter are receiving only that maintenance needed to keep them running. Other cars are on a rebuilding schedule designed to assure a longer life.

So today we have a unique rail system in Cleveland,, but one not used to full potential. The high platform line—19 miles in length—carries only about 40,000 passengers in a 20-hour day. (For comparison, the recently opened and imperfectly operated 12-mile Blue line of the Washington, D.C. Metro carries nearly 100,000 in a 14-hour operating day.) Base service is provided by single "Airporters" operating in the manner of a street car or interurban. It is interesting to watch the operator swivel his chair 180° to watch each fare deposited in the box and then swing 'round again to start the car. Perhaps 1000 persons a day use the airport service—which runs on an average of every 10 minutes throughout the day.

In rush hours three-car Airporter trains are supplemented by five-car trains of the older cars.

The Shaker lines also run single cars in off-peak hours. Headway

Despite the "Airport" sign, this three-car train of "Airporters" is headed for Windermere at the opposite end of the line.

VAN AKEN LOCAL

AIRPORT

In 1958 the original Kuhlman center entrance cars reached the end of their useful lives. Most three of them have Shaker Square and its apartment buildings. One car is preserved in operating condition on the line, and several others survive in museums.
Stephen D. Maguire

from downtown to Shaker Square is every ten minutes. At Shaker Square the line splits, and alternate cars run on Van Aken Boulevard to Warrensville Center Road (the more heavily patronized of the two routes) or continue straight down Shaker Boulevard to Green Road.

In rush hours two- and three-car trains serve Union Terminal on headways as short as one or two minutes, but four or five minutes is more typical.

Ridership showed a steady decline on both the high platform and Shaker until 1976. On Shaker over 6,100,000 rode in 1960, but by 1975 this had dropped to 3,600,000. This showed a dramatic increase to 4,700,000 in 1976. On the high platform from a top of 18,300,000 in 1960 riders dropped to 10,800,000 in 1975. The increase in 1976 to 11,700,000 is not so dramatic as Shaker, but still noteworthy.

The 1976 jumps are accounted for by the formation of a regional transit authority with attendant lowered fares financed by a county-wide sales tax. Fares on both lines are now 35¢, with a 25¢ local fare in Shaker Heights.

The reason for the long term decline in patronage seems obvious. Both lines are designed to move commuters and shoppers into and out of downtown Cleveland; neither provides urban transport within the city center. (In this, Cleveland's electrics resemble San Francisco's BART, which was also built to move commuters and has thus far been a disappointment.) But downtown Cleveland is declining (some would say dying), and fewer and fewer need to go there, despite efforts to reverse the trend. The suburban shopping centers and business concentrations close to freeway interchanges have taken the place of the city center.

Whether the downtown subway, authorized in 1953 but never built would have made a difference is problematical. Building the rapid transit facility to accommodate trolleys from outlaying areas and funnel them into the downtown might have been a help, but this, too, is doubtful.

What of the future? Other extensions are on the drawing boards, but unless the energy crisis again becomes apparent one suspects that construction is unlikely. On the other hand, the existing lines serve a useful purpose, and without them highway congestion would be much worse. Several thousand cars park daily in parking lots along the rapid and in Shaker Heights, and downtown bus traffic is significantly reduced by transfer to trains at the rapid stations.

Shaker's PCCs are wearing out, and bids have been asked for replacements. In the interim skilled maintenance people keep the existing fleet running in support of a schedule that requires virtually every car every work day.

Certainly in the near term at least both the trolleys and the trains will continue to play a valuable role, though neither can be said to be essential. The longer term would seem to depend on the price and availability of gasoline.

The Shaker Boulevard line was extended in 1937 to Green Road, and poles were erected for a further extension along a right-of-way provided a decade earlier. Extension beyond this point in the near future is unlikely, however.

PHOTOGRAPHY IN CLEVELAND

For the casual visitor, photography of the Cleveland system can present problems. In Shaker Heights the wide rights-of-way allow many opportunities, and good shots can be obtained along most of Shaker Boulevard and Van Aken Boulevard. Between Shaker Square and Union Terminal for the most part the line is away from streets, and access to the right-of-way except at stations is difficult. The same problem exists along virtually all of the high platform rapid. Its route follows either the old Nickel Plate or New York Central right-of-way and it is away from streets. To get views of PCC's and trains on the same track, the high platforms at East 55th Street are probably best, though the area around East 34th Street offers possibilities. Photos of the trains from other station platforms are of course possible, as are overhead shots from bridges. If you want to be sure of good pictures, plan on staying in the area several days, so that time is available to locate the best spots.

A three-car train inbound on Shaker Boulevard sports examples of three paint schemes. The lead car is in the old yellow, the second is a new red and white, and the last car is a real traction orange.

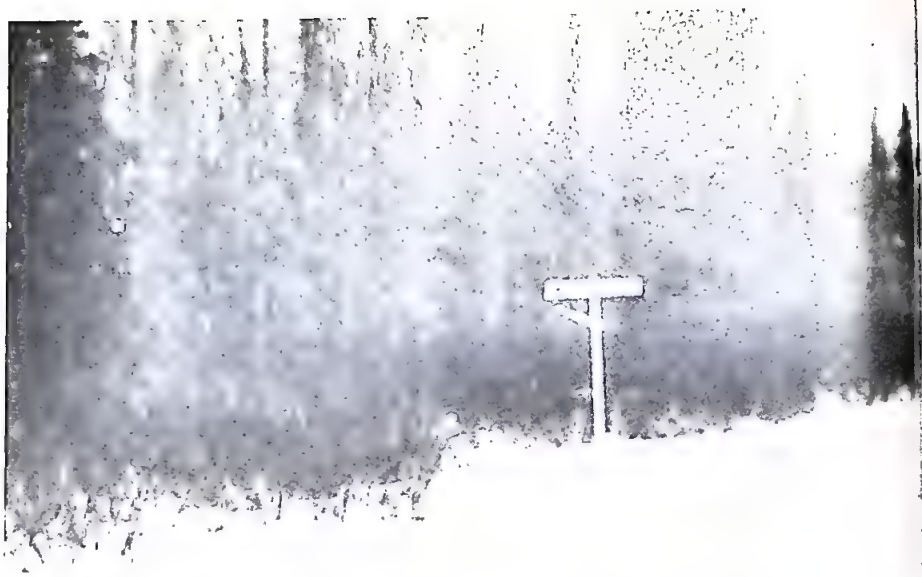
DOMES TO McKINLEY, VIA HONOLULU

(Continued from page 17)

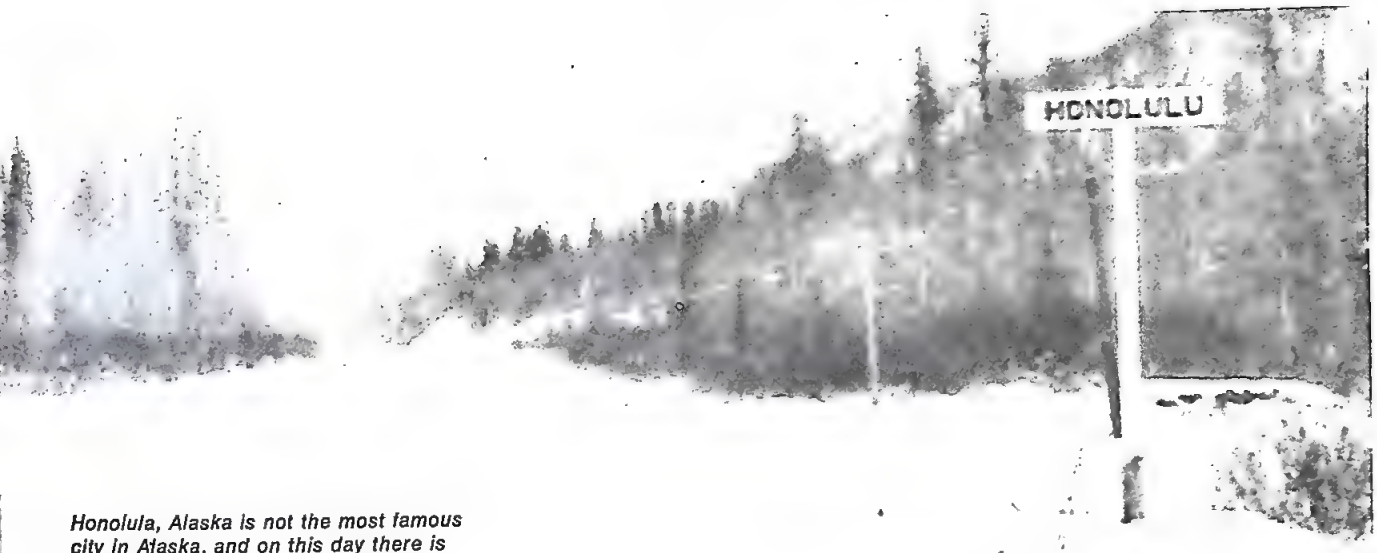
the feeling of being in a amphitheater.

The mix of people riding the train to points in the interior is as varied as Alaska. It may include young people with back-packs probably planning to camp in the wilderness for the summer, pipeliners traveling to and from their jobs or middle-age or senior citizens on a tour.

The huge mountain looms into view. The natives call it "Denali—The Great One." Others refer to it affectionately as "Big Mac" until they see it, then they know it as Denali. It is the number one attraction in Alaska, a mecca for campers on weekends. The massive 20,320 ft. peak is the largest land mass in the



It's a chilly 8 below in the Mankusta Valley, and No. 6 has a few freight cars directly behind the F units. From this point it is a steady 1 percent or more grade for almost 200 miles to the Summit.



Honolula, Alaska is not the most famous city in Alaska, and on this day there is no one to greet us, except, maybe, a moose looking from the bush.

No. 6 rolls into Talkeetna where a group of climbers unloads their gear for an assault on Mt. McKinley.

The long train, once owned by the Union Pacific, sweeps into a gentle curve across a small tributary of the Susitna River.

The southbound train takes the siding at Broad Pass, waiting for a meet with its opposite traveling companion. ▶

world and is second only to Yellowstone National Park in size, but with the thousands of acres recommended to be added to its boundaries, it is likely to make it the largest.

The train reaches the peak of its elevation at Summit, 2363 ft. above sea level, 198 miles from Anchorage. It is the lowest crossing of the divide from Mexico to Alaska. Summit Lake divides its waters by sending half west to the Bering Sea and the rest south to the Pacific Ocean.

McKinley Park station is reached by mid-afternoon. The train seems to empty but rapidly fills again as other people board to continue their journey. Leaving the park, the train rides on a shelf of a shifting mountain, steadily moving into the Nenana River. One can see the old road beds where the mountain has shifted, taking the track with it. Heavy track work is seen where constant efforts are made to keep the road bed in place.

After traversing the narrow and twisting Nenana Canyon, crossing over a number of impressive bridges, the train dives into two tunnels before reaching the coal town of Healy where crews are changed.

The track straightens and levels out towards the Tanana River crossing at Nenana where it swings into a spectacular 10 degree horseshoe curve on the approach to the 700 ft. span. Breaking away from the torturous curves near the river, the train scoots across the level tundra with a vengeance, easing into gentle curves as it follows the flood plains into Fairbanks.

In mid-summer the sun is still high at 9 p.m. when the train rolls into Fairbanks, the weather is warm, but the climate in this 356 miles can be brutal. The climate ranges from moderate temperatures at sea level in Anchorage to the interiors extremely cold or intolerably hot. The interior gets "Hellish hot" during the short summer and "Hellish cold" during the long winters.

In 10½ hours, the train has taken us on a trip through the wilderness and beauty of Alaska. We have had a lesson in geography and passed places where history was made and went through places where a new chapter in history is being written as we ride.

We hope that as civilization spreads its waving arms and throws this vast country into a more modern age that the Alaska Railroad will continue to send its trains through the small villages and into the high country.

The AuRoRa has character and must be preserved.

5
5

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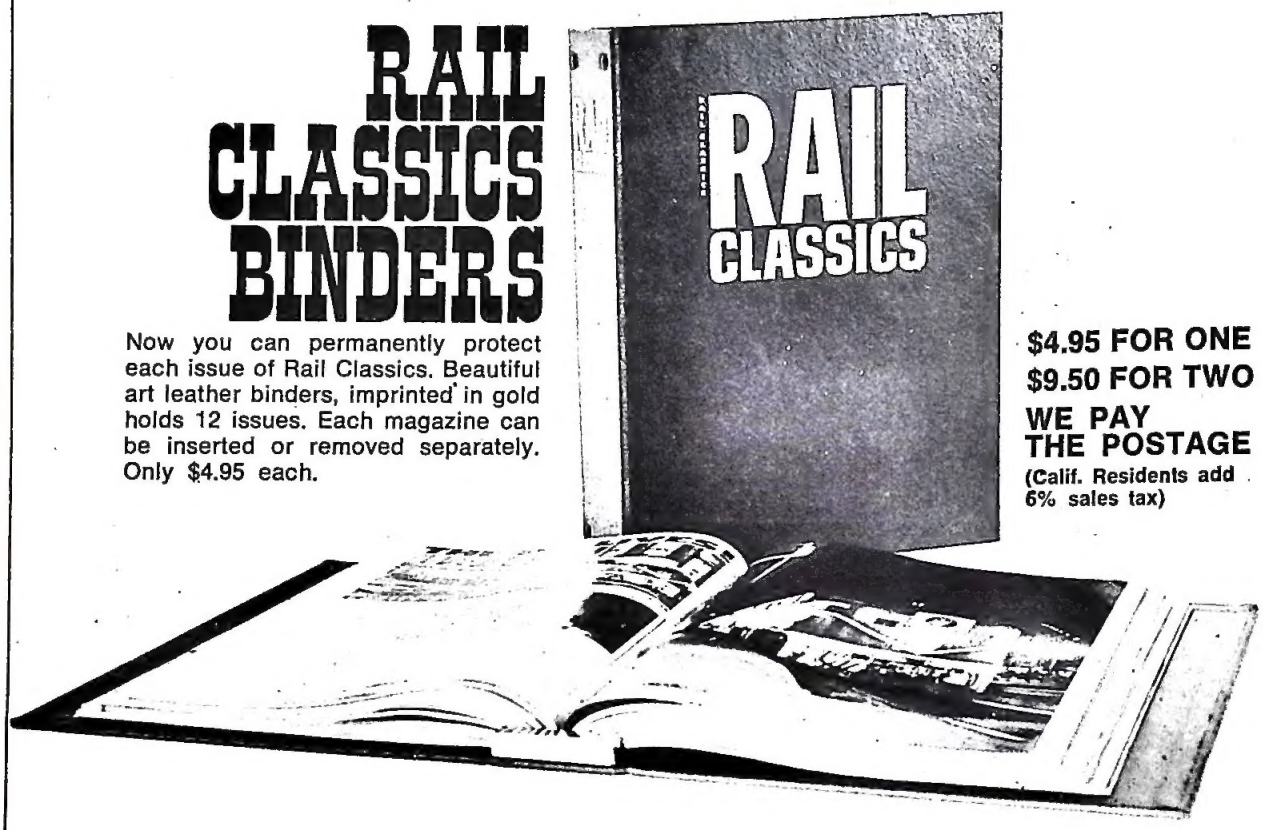

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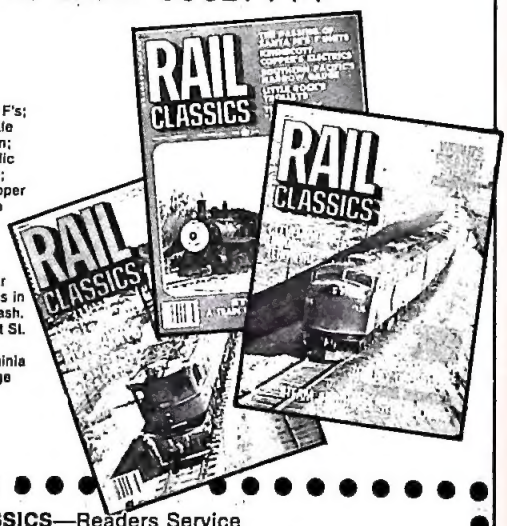

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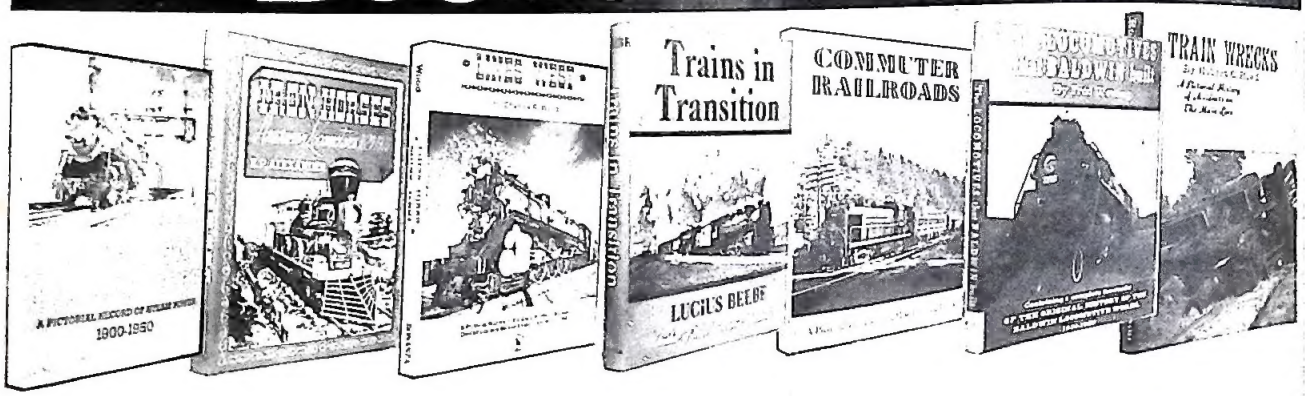

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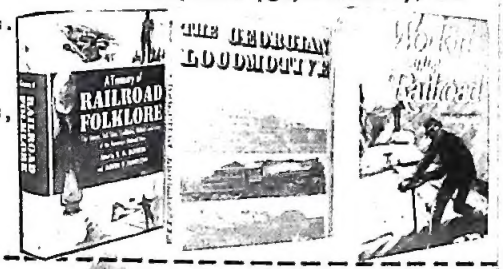

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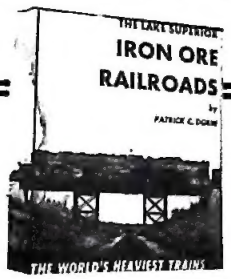

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